PATTERNS OF PROVINCIAL GOVERNMENT HEALTH EXPENDITURES BY AGE AND GENDER IN ALBERTA AND OTHER JURISDICTIONS

– 1980 TO 1997 –

Health Economics
Alberta Health
March 1998

101-03733/

TABLE OF CONTENTS

EXECUTIVE SUMMARY
Major findings i
Conclusions v

I. INTRODUCTION 1

II. TREND ANALYSIS - ALBERTA
A. Total Provincial Health Expenditures and Economic Growth 2
B. Provincial Health Expenditures by Gender 6
C. Health Expenditures by Age Group 7

III. MAJOR FACTORS AFFECTING THE GROWTH OF TOTAL PROVINCIAL HEALTH EXPENDITURES 9

IV. ECONOMIC IMPACT OF AN AGING POPULATION ON PROVINCIAL HEALTH EXPENDITURES 12
A. Methodology 13
B. Analysis 14

V. INTERPROVINCIAL COMPARISON 14
A. Total Provincial Health Expenditures 15
B. Health Share of Total Provincial Financial Resources 16
C. Per Capita Provincial Health Expenditures by Gender and by Age Group 17
D. Distribution of Health Expenditures and Population by Age Group 20
E. Major Factors Affecting the Growth of Provincial Health Expenditures 21

VI. INTERNATIONAL COMPARISON 22
A. Health Share of Total Financial Resources 23
B. Distribution of Health Expenditures and Population by Age Group 24
C. Per Capita Health Expenditures by Age Group 25

APPENDIX I: Data Sources, Definitions and Notes
APPENDIX II: Provincial Health Expenditures Data for the Selected Provinces and Canada (In Current Dollars)
APPENDIX III: Provincial Health Expenditures Data for the Selected Provinces and Canada (In 1994 Dollars)
APPENDIX IV: Price Indices for the Selected Provinces and Canada
APPENDIX V: Distribution of Provincial Health Expenditures and Population Among Age Groups - for the Selected Provinces and Canada

LIST OF TABLES

ALBERTA TRENDS

Table 1 - Provincial Health Expenditures as a Percentage of GDP and Government's Total Program Expenditures 4

Table 2 - Real Per Capita Provincial Government and Total Program Expenditures and Per Capita Real GDP 5

Table 3 - Distribution of Population by Gender 6

Table 4 - Age-Sex Standardized Real Per Capita Provincial Health Expenditures by Gender 7

Table 5 - Distribution of Population and Provincial Health Expenditures Among Age Groups 8

Table 6 - Difference Between the Average Annual Changes in Price Indices 10

Table 7 - Average Annual Growth Rates of Factors Affecting the Growth of Provincial Health Expenditures by Age Group 12

Table 8 - Economic Impact Due Solely to Population Aging from 1980 to 1994 - by Gender 14

INTERPROVINCIAL COMPARISON

Table 9 - Real Provincial Health Expenditures as a Percentage of Real GDP 16

Table 10 - Age-Sex Standardized Real Per Capita Provincial Health Expenditures 17

Table 11 - Real Per Capita Provincial Health Expenditures by Age Group 19

Table 12 - Per Capita Relative Health Expenditures for Seniors 20

Table 13 - Distribution of Population and Provincial Health Expenditures Among Age Groups 21

INTERNATIONAL COMPARISON

Table 14 - Total Health Expenditures as a Percentage of GDP for Alberta, Canada, and Other G - 7 Countries 23

Table 15 - Distribution of Health Expenditures and Population Among Age Groups - 1993 25

Table 16 - Per Capita Relative Health Expenditures by Age Group 26

LIST OF FIGURES

ALBERTA TRENDS

Figure A - Annual Percentage Changes in the Alberta Government Health and Total Program Expenditures, Health Inflation and Provincial Resources (GDP) 2

Figure B - Trends in Per Capita Provincial Health and Total Program Expenditures and Per Capita GDP 3

Figure C - Annual Changes in the Implicit Price Indices for the Government Health Care Components Government Goods and Services, GDP and Consumer Price Index 4

Figure D - Annual Changes in Real Alberta Government Health and Total Program Expenditures, and Real GDP 5

Figure E - Age-Sex Standardized Real Per Capita Provincial Health Expenditures by Gender 7

Figure F - Percentage Distribution of Provincial Health Expenditures and Alberta Population Among Age Groups 8

Figure G - Real Per Capita Provincial Government Health Expenditures by Age Group 9

Figure H - Average Annual Growth Rates of Major Factors 11

INTERPROVINCIAL COMPARISON

Figure I - Average Annual Growth Rates of Provincial Health Expenditures 15

Figure J - Age-Sex Standardized Real Per Capita Provincial Health Expenditures by Gender 18

Figure K - Average Annual Growth Rates of Major Factors Affecting the Provincial Health Expenditures from 1980 to 1994 22

INTERNATIONAL COMPARISON

Figure L - Total Health Expenditures as a Percentage of GDP for Alberta, Canada and Other Selected Countries 24

EXECUTIVE SUMMARY

The effectiveness of the health services delivery system is dependent upon appropriate planning which in turn depends on the availability of good information. This report attempts to provide detailed information to policy makers on provincial health expenditures through:

1. analyzing patterns for the Alberta government total health expenditures as well as health expenditures for seniors, adults, and children by gender;
2. analyzing trends of major factors (e.g. population, price, utilization, etc.) that have affected past spending on health by the Alberta government;
3. estimating the economic impact of an aging population on provincial health expenditures; and
4. providing an interprovincial comparison of total provincial health expenditures by age group and gender for selected provinces (Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia) and Canada, and comparing the Alberta situation with G - 7 countries (United States, Canada, France, Germany, Italy, Japan and the United Kingdom).

The report is limited to the analysis of provincial government health expenditure data at the provincial and national levels. However, for international comparison purposes, total health expenditure (both public and private) figures are used due to the lack of provincial government health data for other countries.

Major findings

Alberta Trends

- Provincial health expenditures (in current dollars) in Alberta grew from $1.5 billion in 1980 to $4.0 billion in 1995 with an average annual growth rate of 6.8%. During this period, gross domestic product (GDP) and provincial government total program expenditures grew at slower rates of 4.7% and 5.1% , respectively, on average.

  During this period, however, real Alberta government health expenditures and total program expenditures, and real GDP (in 1994 constant dollars) increased only at average annual rates of 2.1%, 1.1%, and 2.3%, respectively.

- Health expenditures as a percentage of GDP (in current dollars) showed an increasing trend from 1980 (3.5%) to 1992 (6.3%) and then declined to 5.2% and 4.7% during 1994 and 1995, respectively. During this period, health expenditures as a percentage of provincial government total program expenditures showed more or less similar trends due to health reforms.

- In Alberta, health spending on women accounted for 56% to 58% of the total provincial health expenditures. Although the Alberta population is almost evenly split between males and females, the proportion of elderly women is much higher than elderly men. This is one of the major reasons for higher health expenditures for women besides higher health services utilization related to childbearing.

- The variance in age-sex standardized real per capita provincial health expenditures is significant between genders. In 1980, real per capita health expenditures were $1,195 per male and $1,463 per female. The expenditures peaked in 1992 ($1,587 per male and $1,934 per female) and then dropped during recent years. In 1994, the province spent $1,414 and $1,735 per capita on the health services for men and women, respectively.

- The Alberta population is aging. The proportion of seniors (65 years of age and older) increased from 7.3% in 1980 to 9.5% in 1994 and the 45-64 age group increased from 16.1 % (1980) to 18.4% (1994). During this period, the proportions of children (0 -14) and the 15-44 age group dropped by 1.3% and 3.2%, respectively.

- Over the reported period, the Alberta government spent less than 10% of total provincial health expenditures on children who represented almost one quarter of the total population. Forty-two percent to forty-seven percent of total health expenditures was spent on seniors who represented only 7% to 9% of the total population.

- Real per capita provincial health expenditures varied significantly from one age group to another throughout the reported period. In 1980, it was $7,598 for seniors as compared to $524 for children, $817 for the 15-44 age group, and $1,336 for the 45-64 age group. Real per capita expenditures peaked in 1992 at $8,130, $665, $1,116, and $1,741 for the respective age groups and then dropped for all age groups during 1993 and 1994 due to health reforms. In 1994, health spending was $7,112 for seniors, $588 for children and $994 and $1,502 for the 15-44 and 45-64 age groups, respectively.

- Provincial government health expenditures increased by an average annual rate of 6.8% from 1980 to 1995. During this period, major determinants of health, i.e., price, population and real per capita health expenditures increased with average annual rates of 4.5%, 1.5%, and 0.6%, respectively.

- Public sector health specific inflation slightly outstripped that of the consumer price index (general inflation) from 1980 to 1995 averaging 4.5% per annum in the former compared to 4.4% for the latter.

- The average annual economic impact on the real provincial health expenditures due solely to population aging was $25.7 million from 1980 to 1994. The median age of Alberta population is expected to increase by 18.8% from 1994 (32.4 years) to 2016 (38.5 years). During this period, population aging is expected to lead to an additional $40.6 million (in 1994 dollars) required each year for the provincial health care budget.

Interprovincial Comparison

- Provincial health expenditures (in current dollars) in Canada grew at an average annual rate of 7.8% from 1980 to 1995. During this period, the Alberta rate (6.8%) was 1.0% below the national average and second lowest after Saskatchewan (6.6%) when compared with the growth rates of other selected provinces. The average annual growth rate was the highest for Ontario (9.0%), followed by British Columbia (8.7%), Manitoba (7.2%) and other selected provinces.

- Overall, provincial health expenditures grew much faster during the early '80s than the late '80s . During the early '90s, growth rates further slowed across Canada. During 1996 and 1997, provincial health expenditures are expected to stay more or less at the 1995 level for all the selected provinces except for British Columbia, where it is forecast to grow by 2.2% annually on average.

- The Alberta government spent the least financial resources on health care out of total resources when compared with Canada and other selected provinces throughout the reported years. For Alberta, real health expenditures as a percentage of GDP ranged from 4.8% to 6.1% from 1981 to 1995. During most of the reported years, Saskatchewan spent the most (6.6% - 7.8%), followed by Manitoba (6.8% - 7.5%), British Columbia (5.5% - 6.8%), and Ontario (5.4% - 6.1%).

- Real provincial health expenditures as a percentage of the provincial government's real total program expenditures were the highest for Ontario and the lowest for Alberta among the selected provinces and Canada from 1980 to 1995. On average, the Alberta government spent 27.7% of the total program expenditures annually on the health of Albertans, 5.7% points lower than the national average of 33.4%. Among the other selected provinces, the average annual health care proportion was 38.7% for Ontario; 34.7% for Manitoba; 33.7% for British Columbia; and 31.9% for Saskatchewan.

- It is interesting to note that among the selected provinces and Canada, when the effect of provincial population age structure differences was removed, age-sex standardized real per capita health expenditures were the highest in Alberta during the '90s as well as the '80s, although real per capita health expenditures started declining from 1992 due to health reforms in Alberta.

  In 1994, age-sex standardized real per capita provincial health expenditure was the highest in Alberta ($1,574), followed by British Columbia ($1,571), Ontario ($1,525), Manitoba ($1,383), and Saskatchewan ($1,288).

- Age-sex standardized real per capita provincial health expenditures for females were higher than for males across Canada throughout the reported period.

- In 1980, real per capita health expenditures for seniors were the highest in Alberta ($7,598) and the lowest in Saskatchewan ($4,551). From 1980 to 1993, the rates grew for most age groups across Canada. However, from 1993 to 1994, they declined for all age groups in Canada except for seniors in British Columbia. A sharp decline in the rates for Alberta seniors ranked Alberta ($7,112) the second highest after British Columbia ($7,759) in 1994.

- In Alberta, the proportion of seniors was 7.3% in 1980, the lowest among the selected provinces and 2.1% points lower than the national proportion. Regardless of lower senior population, Alberta spent almost the same proportion of the total provincial health expenditures on seniors as Canada did (42%) during that year. In recent years, however, the Alberta situation has changed. In 1994, Alberta spent a relatively lower proportion (42.9%) of total provincial health expenditures than the national proportion of 49.3% and the lowest when compared with the proportion of other selected provinces.

International Comparison

- Total health expenditures (public and private) as a percentage of GDP for Alberta, Canada and other G - 7 countries showed a general rising trend from 1980 to 1993 despite wide variations in the health systems in the selected countries. From 1993 to 1995, it dropped in Alberta and in most of the G - 7 countries. United States ranked #1 throughout the reported period among the selected countries and Alberta.

- In Alberta, total health expenditures as a percentage of GDP were the lowest during 1980 and 1981 and second to lowest (after United kingdom) from 1982 to 1985 as compared to Canada and other G - 7 countries. During late '80s, however, the ratio increased at a faster rate in Alberta (peak of 9.2% in 1992), compared to the United Kingdom, Japan, and Italy, where it stabilized between 6% and 7% from 1985 to 1992.

- In recent years, total health expenditures as a percentage of GDP in Alberta decreased continuously to 7.5% in 1995 (consistent with the national trend). Among other countries, the proportions decreased from 1994 to 1995 in Italy (from 8.4% to 7.7%), increased in the United States (from 14.1% to 14.2%), France (from 9.7% to 9.9%), Germany (from 10.1% to 10.3%), and Japan (from 6.6% to 6.9%), and stabilized in the United Kingdom (6.9%).

- Data for 1993 show that the proportion of seniors was the lowest in Alberta (9.3%) as compared with Canada (11.7%) and other selected countries. During this year, the proportion of seniors was the highest in Sweden (17.5%), followed by United Kingdom (15.6%), Germany (15.1%), and other selected countries.

- Canada spent the highest proportion of the total health expenditures on seniors (48.9%) in 1993 when compared with other selected countries. Sweden, with the highest proportion of seniors (17.5%), spent only 37.8% of the total expenditures on seniors during this year.

- Alberta and Canada spent seven times more on the health of seniors than non-seniors during 1994. These proportions are significantly higher than in the other selected countries. Among other countries, the proportions ranged between 2.7 times (Germany) to 4.8 times (Japan). The higher proportions in Alberta and Canada would appear to be due to the more comprehensive coverage under the publicly funded health care system in Canada than in other countries.

Conclusions

1. A comparative analysis shows a higher degree of fluctuations in the trends of provincial health expenditures in Alberta as compared to other selected provinces and Canada from 1980 to 1995.

2. Among the selected provinces, the Alberta government spent the least amount of its financial resources (health expenditure as a percentage of GDP) on health care throughout the reported period. However, real per capita health expenditures were relatively higher in Alberta than in other provinces during the reported period, when the effect of differences in the provincial population structures was removed.

3. Alberta government health expenditures dropped more drastically in latter years of the review period as compared to other selected provinces due mainly to more substantial health reforms in Alberta than in other provinces.

4. A comparative analysis shows that Alberta had the highest real per capita health expenditures for seniors among the selected provinces until 1993. However, in 1994, Alberta ranked second after British Columbia due to recent health reforms.

5. Among Alberta and the G - 7 countries, Alberta and Canada spent seven times more on the health of seniors in 1993, while the proportions ranged from three to five times in other selected countries. The higher proportions in Alberta and Canada are mainly due to the more comprehensive coverage under the publicly funded health care systems in Canada than in other selected countries.

6. Real provincial health expenditures due solely to population aging grew with an average annual rate of 0.7% from 1980 to 1994. This growth translates to an average increase of $25.7 million on the provincial health spending and $9.45 per person for health expenditures each year from 1980 to 1994.

I. INTRODUCTION

An individual's use of the health system over his/her life cycle and the related cost has been a focus of a number of studies. Expenditures related to various stages in the life cycle have been analyzed and compared to some extent in various studies. For health policy makers, it is important to understand health expenditure issues thoroughly in order to make sound decisions. This better understanding will result in innovative solutions to reduce health expenditures without hurting the quality of care.

Population statistics show that there was a continual increase in both the number and the proportion of elderly people in Alberta and across Canada in recent years. The demographic structure of our society is changing towards an older population. The health and social well being of the aged population is a major issue of concern to all levels of government, policy makers, planners, and the public at large.

Although a positive relationship between an aging population and increased health care costs has been accepted, the significance and extent of this relationship have not been widely available. The main objectives of this report are:

1. to analyze the Alberta government total health expenditures as well as health expenditures for seniors, adults, and children by gender;
2. to analyze trends of major factors (e.g. population, price, utilization, etc.) that have pressured past spending on health by the Alberta government;
3. to estimate the economic impact of an aging population on provincial health care expenditures; and
4. to provide an interprovincial comparison of total provincial health expenditures by age group and gender for the selected provinces (Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia) and Canada. Wherever possible, the Alberta situation is also compared with Canada and other G - 7 countries (i.e. United States, France, Germany, Italy, Japan and the United Kingdom).

Data for Alberta, Canada, and for the selected provinces used in this report were obtained from the Canadian Institute of Health Information (CIHI). Comparable health data by age and gender were only available from 1980 to 1994. Since the data are compiled by a national agency based on a set definition of health (see Appendix I for definitions), the overall comparability of provincial and national statistics is enhanced. Data on other countries are obtained from the Organization of Economic Co-operation and Development (OECD). This data may not be comparable due to differences in the health care systems and reporting systems in the selected countries.

Total health expenditures are comprised of both public and private sectors spending on health. The scope of this paper is, however, limited to the provincial government component of public health expenditures (hereinafter called health expenditures interchangeably) because of the availability of the comparable health expenditure data by age and gender at the provincial level only. However, for international comparison purposes, total health expenditures (both public and private) data are used due to lack of provincial data for other countries.

This report presents health data both in current dollars and in 1994 constant dollars (after accounting for inflation). The reason for using current dollar figures is to present the actual amount spent by the provincial governments during each reported year; the 1994 constant dollar figures provide the comparison in real terms after removing the impact due to price changes over the reported period.

II. TREND ANALYSIS - ALBERTA

This chapter analyzes trends of total and per capita provincial health expenditures from 1980 to 1995 and expenditure forecasts for 1996 and 1997. A comparative analysis of the trends in the provincial health expenditures and economic growth are provided in Section A. Changes in health expenditures shares out of the total gross domestic product (GDP) and provincial government total program expenditures are also provided in this first section. Section B highlights differences in the age-sex standardized real per capita health expenditures for males and females. The final section presents distribution of population and provincial health expenditures among different age groups.

A. Total Provincial Health Expenditures and Economic Growth

The Alberta government's total health expenditures (in current dollars) grew from $1.5 billion in 1980 to $4.0 billion in 1995 with an average annual growth rate of 6.8%. The trend analysis shows that the growth rate was high during the early '80s, moderate in the late '80s, and low in the early '90s. However, it declined continuously from 1993 ($4.5 billion) to 1995 ($4.0 billion) and is forecast to remain at the 1995 level during 1996 and 1997.

A similar trend was observed in the per capita provincial government health expenditures which increased at an average annual rate of 5.2% from 1980 ($686) to 1995 ($1,464) with major increases in the early '80s. The rate peaked in 1992 at $1,729 and then declined each year until 1995. It is expected to decline by one to two percentage points in 1996 and 1997.

GDP is the total value of goods and services produced within the boundaries of a province and is a measure of the economic health of the province. During the reported period, Alberta's GDP grew from $43.1 billion in 1980 to $84.9 billion in 1995 with an average annual compound rate of 4.6%, while provincial government total program expenditures grew by 5.2% on average (per annum) from 1980 ($6.6 billion) to 1995 ($14.2 billion). Figure A presents a comparison of year to year percentage changes in the provincial government health expenditures, total program expenditures, GDP, and public sector health inflation.

Figure - A

Annual Percentage Changes in the Alberta Government Health and Total Program Expenditures, Health Inflation and Provincial Resources (GDP)

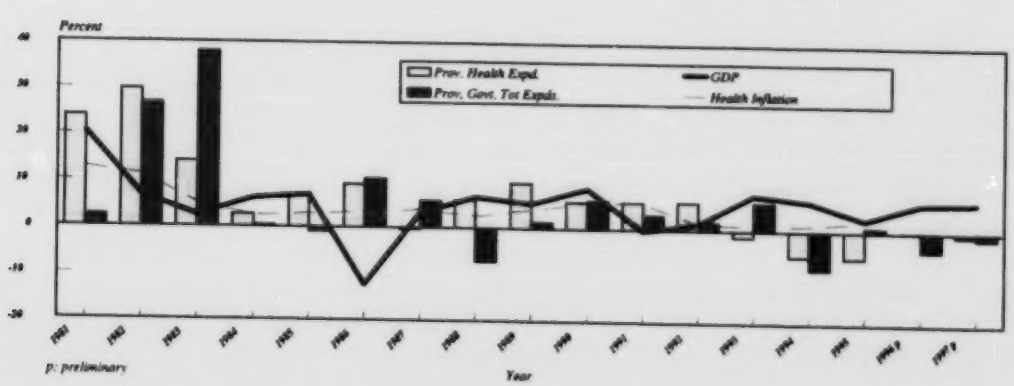
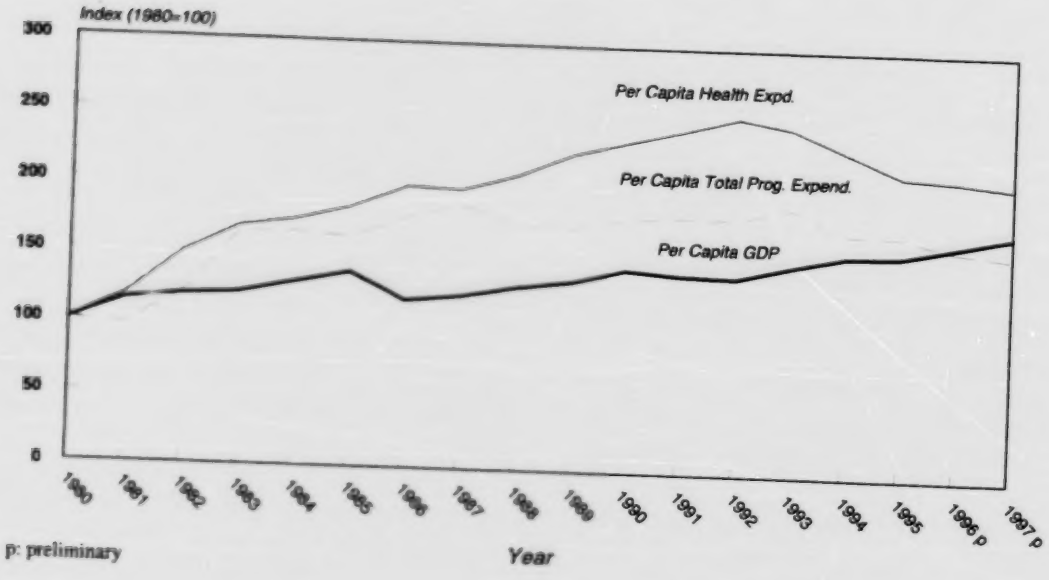


Figure A shows that the provincial government health expenditures grew at a much faster rate than GDP and total government program expenditures in the '80s and early '90s. Most of this is related to the public sector health inflation and population growth. In Alberta, health care inflation significantly exceeded overall inflation in the early '80s. Population growth was also higher in Alberta in the early '80s compared with the late '80s and '90s due to net migration and high birth rate among baby boomers. From 1993 to 1997 (forecast), the growth rate of the GDP surpassed the growth rate of provincial health expenditures. This was mainly due to the major reduction in the health spending due to health reforms in Alberta during this period.

Similar trends can be observed (see Figure B) in the per capita GDP, per capita provincial health expenditures, and total program expenditures from 1980 to 1995 and for the 1996 and 1997 period. The underlying reasons for these trends are the same as explained in the above paragraph. (For data, see Appendix II, Table 2).

Figure - B

Trends in Per Capita Alberta Government Health and Total Program Expenditures, and Per Capita GDP



The Alberta government allocated more financial resources out of its total wealth on the health of Albertans than on other services. In 1980, Alberta government health expenditures were equivalent to 3.5% of the GDP. The health care spending to GDP ratio is an indicator of the extent to which the province=s resources are used in health related activities. This ratio increased almost continuously to 6.3% in 1992 and then started declining. It fell to 4.7% in 1995 due to recent health reforms. Table 1 shows that further declines occurred in 1996 and 1997.

Table 1 shows that the Alberta government health expenditures as a percentage of the government's total program spending increased from 22.8% in 1980 to 31.7% in 1992. From 1993 to 1995, it ranged from 28% to 30%, and it remained within this range in 1996 and 1997.

Table - 1

Prov. Govt. Health Expenditures as a Percentage of GDP								
1980	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996 p*	*1997 p*
3.5	*5.7*	*6.1*	*6.3*	*5.8*	*5.2*	*4.7*	*4.5*	*4.2*
Prov. Govt. Health Expenditures as a Percentage of Govt. Total Program Expenditures								
1980	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996 p*	*1997 p*
22.8	*29.7*	*30.5*	*31.7*	*29.6*	*30.4*	*28.4*	*29.7*	*29.8*

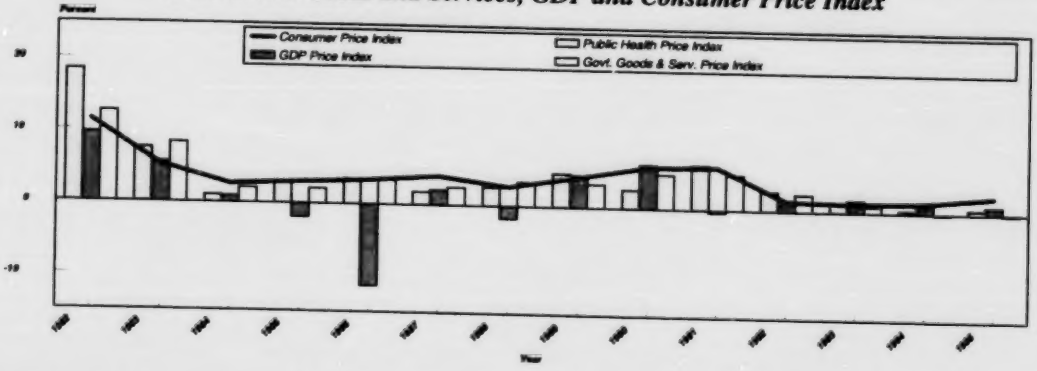
P: preliminary

It is important to note that trends presented above for the time series data for provincial government health expenditures, total program expenditures, and GDP (in current dollars) reflect two elements of changes: changes in the volume of services/commodities and changes in the prices attached to these services/commodities. The following figure shows the extent of differences in the:

- public sector health care components implicit price index for provincial health expenditures;
- government goods and services implicit price index for provincial total program expenditures;
- implicit price index for GDP; and
- the Consumer Price Index for overall inflation.

Figure - C

Annual Changes in the Implicit Price Indices for the Government Health Care Component, Government Goods and Services, GDP and Consumer Price Index



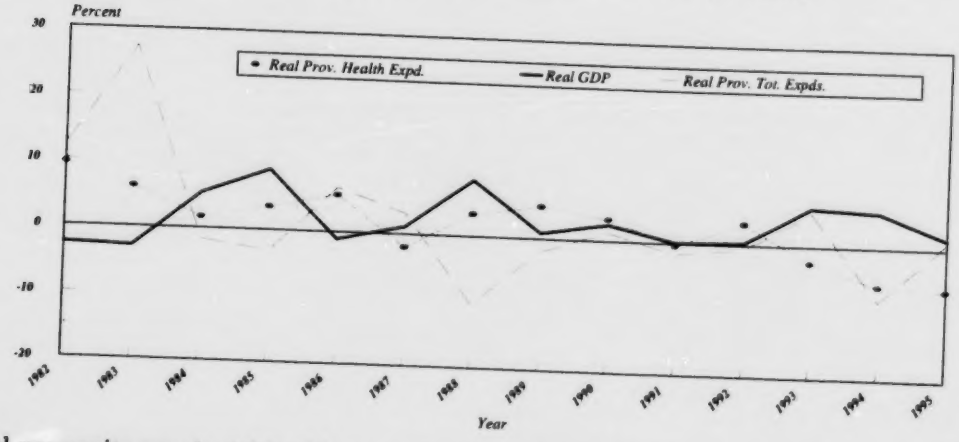
As price movements are significantly different for the provincial health expenditures and total program expenditures as well as for GDP over the reported period, this section of the report provides a real comparison of the trends for the provincial health and total program expenditures and GDP (in 1994 constant dollars) by removing the price changes from the annual nominal values of the respective indicators.

The Alberta government's real provincial health expenditures grew at an average annual rate of 2.1% from $2.9 billion in 1980 to $4.0 billion in 1995 with major increments (6% to 10%) during the early '80s. The annual rate of change fluctuated within the range of -2% to 6% from 1984 to 1992 and then decreased between 1993 and 1995.

During this period, real provincial government program expenditures grew by only 1.1% per annum (on average), while real GDP grew at an average annual rate of 2.3% from 1981 to 1995 (data for 1980 is not available). Although Alberta's real GDP and provincial health expenditures grew at more or less the same average annual rates during the reported period, year to year changes depicted significantly different trends (see Figure D).

Figure - D

Annual Changes in Real Alberta Government Health and Total Program Expenditures, and Real GDP (In 1994 Dollars)



Real per capita provincial health expenditures increased with an average annual rate of 0.6% from 1980 ($1,327) to 1995 ($1,455). It reached a maximum of $1,759 in 1992 and then dropped continuously by 4.0%, 6.8%, and 7.5% during 1993, 1994, and 1995, respectively. The sharp decline in recent years was mainly due to health reforms in Alberta.

Provincial government total program real expenditures for the average Albertan also dropped during 1994 (9.1%) and 1995 (0.4%) due to the fiscal policies of the provincial government. During recent years, however, per capita real GDP increased by 4.3% in 1993 and 4.2% in 1994. The rate of growth slowed down in 1995 to 0.2%. See Table 2 for changes in real per capita expenditures and GDP.

Table - 2

	Real Per Capita Prov. Govt. Health and Total Program Expenditures, and Per Capita Real GDP (In 1994 Dollars)						
	1980	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
Per Capita Health Expd.	*1,327*	*1,771*	*1,734*	*1,759*	*1,689*	*1,574*	*1,455*
*Per Capita Tot. Prog. Expd. **	*5,557*	*5,812*	*5,620*	*5,491*	*5,688*	*5,170*	*5,152*
Per Capita GDP	*2,641*	*2,895*	*2,847*	*2,806*	*2,926*	*3,048*	*3,053*

** net of debt charges*

Note: See Appendix II, Table 2 for per capita rates in current dollars for the respective years.

Real provincial health expenditures as a percentage of real GDP was 5.2 in 1981. The ratio dropped by 9.2% over the last fifteen years (from 1981 to 1995). Trend analysis shows a steady increase in the ratio during the '80s and the early '90s . A downward trend started in 1992. The ratio declined continually from 6.3% in 1992 to 4.8% in 1995 mainly due to health reforms during this period (see Appendix III, Table 1).

During this period, real provincial health expenditures as a percentage of real provincial government total program expenditures shows a slightly different trend. The ratio was much higher during the early '80s (28% to 29%) than during the mid '80s (ranged between 23% to 26%). An upward trend was observed from 1988 (28.0%) to 1992 (32.0%). The ratio then dropped continuously and reached the 1988 level in 1995 (see Appendix III, Table 1).

B. Provincial Health Expenditures by Gender

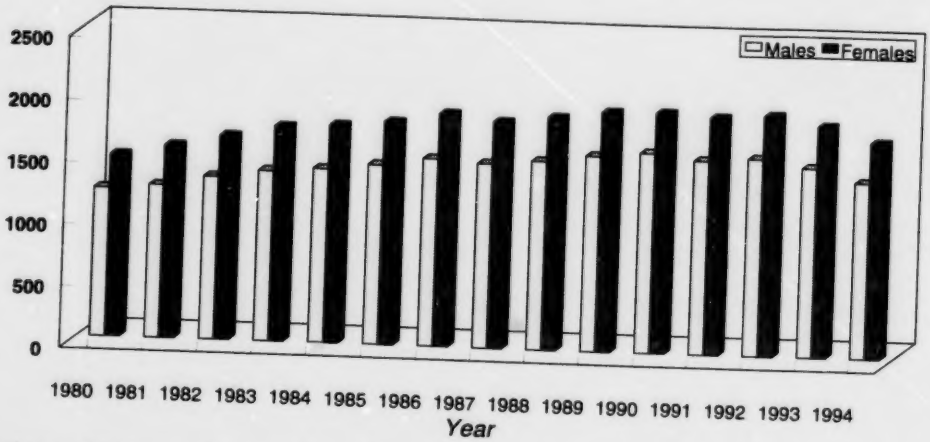
This section of the report provides a comparison of Alberta government health expenditures by gender from 1980 to 1994 (comparable data for 1995 onwards are not available at this time from CIHI). Over the reported period, health spending on women accounted for 56% to 58% of the total provincial government health expenditures. Per capita expenditures were also higher for females than for males both in terms of current and real dollars throughout the reported years (for nominal rates, see Appendix II, Table 3E and for real rates, see Appendix III, Table 3E). The differences in the male and female rates are partially due to the differences in the age distribution of males and females (see Table 3).

Table - 3

Year	***Distribution of Male Population***				***Distribution of Female Population***			
	0-14	*15-44*	*45-64*	*65+*	*0-14*	*15-44*	*45-64*	*65+*
	(%)	*(%)*	*(%)*	*(%)*	*(%)*	*(%)*	*(%)*	*(%)*
1980	*24.4*	*53.1*	*16.0*	*6.5*	*24.3*	*51.4*	*16.2*	*8.1*
1985	*23.9*	*53.3*	*16.2*	*6.7*	*23.4*	*51.7*	*16.1*	*8.8*
1990	*23.9*	*51.5*	*16.8*	*7.6*	*23.1*	*50.2*	*16.7*	*10.0*
1991	*23.9*	*51.2*	*17.0*	*7.7*	*23.1*	*49.9*	*16.8*	*10.2*
1992	*23.8*	*50.7*	*17.2*	*7.9*	*23.0*	*49.4*	*17.1*	*10.4*
1993	*23.6*	*50.2*	*18.1*	*8.1*	*22.8*	*49.0*	*17.7*	*10.5*
1994	*23.4*	*49.8*	*18.6*	*8.2*	*22.6*	*48.5*	*18.2*	*10.7*

Although, the Alberta population is approximately evenly split between males and females with no significant shift from 1980 to 1994, the proportions of elderly women are much higher than elderly men throughout the reported years. This is one of the reasons for higher provincial health expenditures for women besides higher utilization of health services related to child bearing. The bias due to age distribution is removed by standardizing the per capita rates (by applying both sexes population distribution to the respective age groups' per capita health expenditures for males and females). The following figure shows a comparison of age-sex standardized rates for males and females.

Figure - E
Age-Sex Standardized Real Per Capita Provincial Health Expenditures by Gender
(In 1994 Dollars)



The variance between the male and female real per capita health expenditures is lower after standardizing the rates. In 1980, the rate was $1,195 for males and $1,463 for females. For both genders the real rates increased steadily (with minor fluctuations) until 1992 and then dropped in 1993 and 1994 (see Table 4 below for rates).

Table - 4

	Age-Sex Standardized Real Per Capita Provincial Health Expenditures by Gender (In 1994 Dollars)						
	1980	*1985*	*1990*	*1991*	*1992*	*1993*	*1994*
Males	*1,195*	*1,445*	*1,613*	*1,562*	*1,587*	*1,522*	*1,414*
Females	*1,463*	*1,793*	*1,936*	*1,909*	*1,934*	*1,858*	*1,735*

C. Health Expenditures by Age Group

Provincial health expenditures for the age groups 0-14; 15-44; 45-64; and 65 and older are available from Health Canada from 1980 to 1994. Based on this data, this section provides a comparative analysis of the distribution of health expenditures among the selected age groups.

The distribution of population among different age groups shows that in 1980 24.3% of Albertans were 14 years old or younger, 52.3% were 15 to 44 years old, 16.1% were between the ages of 45 to 64, and only 7.3% were seniors. From 1980 to 1994, there was a gradual shift from younger to older persons in the Alberta population structure. During this period, the proportion of 45 years and older increased by 2.2% points, respectively, while the proportion of children and the 15-44 age group decreased by 1.3% and 3.2%. The average annual rate of increase was 3.5% for seniors as compared to 1.5% average annual increase of the total population from 1980 to 1994.

Table - 5

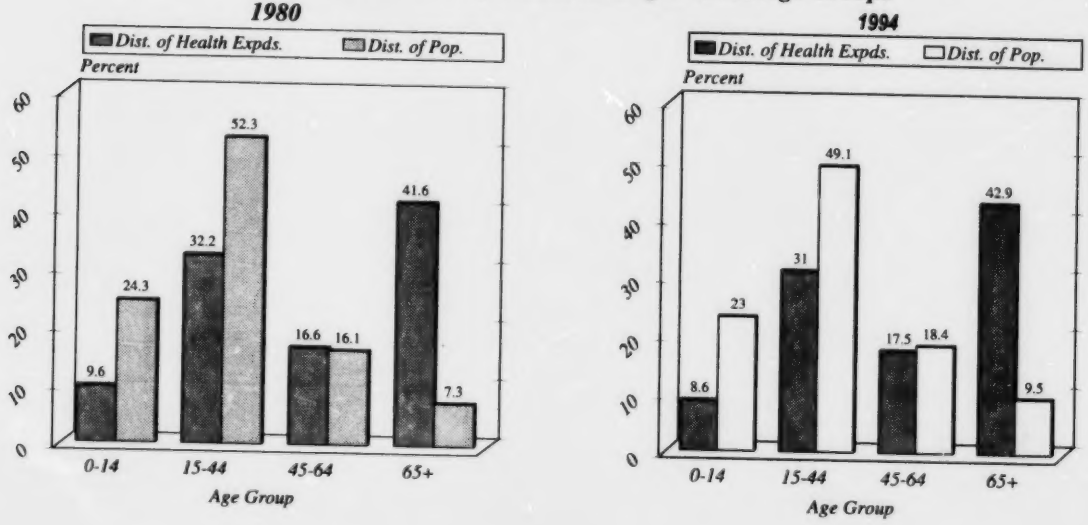
Year	Distribution of Population				Distribution of Prov. Health Expenditures			
	0-14	15-44	45-64	65+	0-14	15-44	45-64	65+
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
1980	24.3	52.3	16.1	7.3	9.6	32.2	16.6	41.6
1985	23.6	52.5	16.2	7.8	8.6	31.0	16.2	44.2
1990	23.5	50.9	16.8	8.8	8.5	32.9	16.9	41.6
1991	23.5	50.5	17.0	8.9	8.8	32.5	17.0	41.7
1992	23.4	50.0	17.5	9.1	8.8	31.8	17.3	42.1
1993	23.2	49.5	17.9	9.3	8.7	31.5	17.4	42.5
1994	23.0	49.1	18.4	9.5	8.6	31.0	17.5	42.9

Table 5 shows that there were also vast differences in the provincial health expenditures by age groups. In 1980, provincial health expenditures on seniors (65 years and older) accounted for 41.6% of the total provincial spending on health as compared to: 9.6% on children (0-14), 32.2% on people 15-44 years old, and 16.6% on 45-64 year old Albertans. During the early '80s and the early '90s, the distribution of provincial health expenditures among different age groups remained fairly stable. However, the proportion of provincial government spending on the health of seniors increased from 1984 (42.2%) to 1988 (47.5%) (see Appendix V, Table 1). During recent years, it has remained between 42% and 43%.

It is worth noticing that overall the Alberta government spent 42% to 47% of total health expenditures on seniors who represented 7% to 10% of the total population. This imbalance is largely due to the fact that elderly people are subject to more chronic illnesses and disabilities. The following figure shows a comparison of distribution of population and health expenditures among the selected age groups for 1980 and 1994.

Figure - F

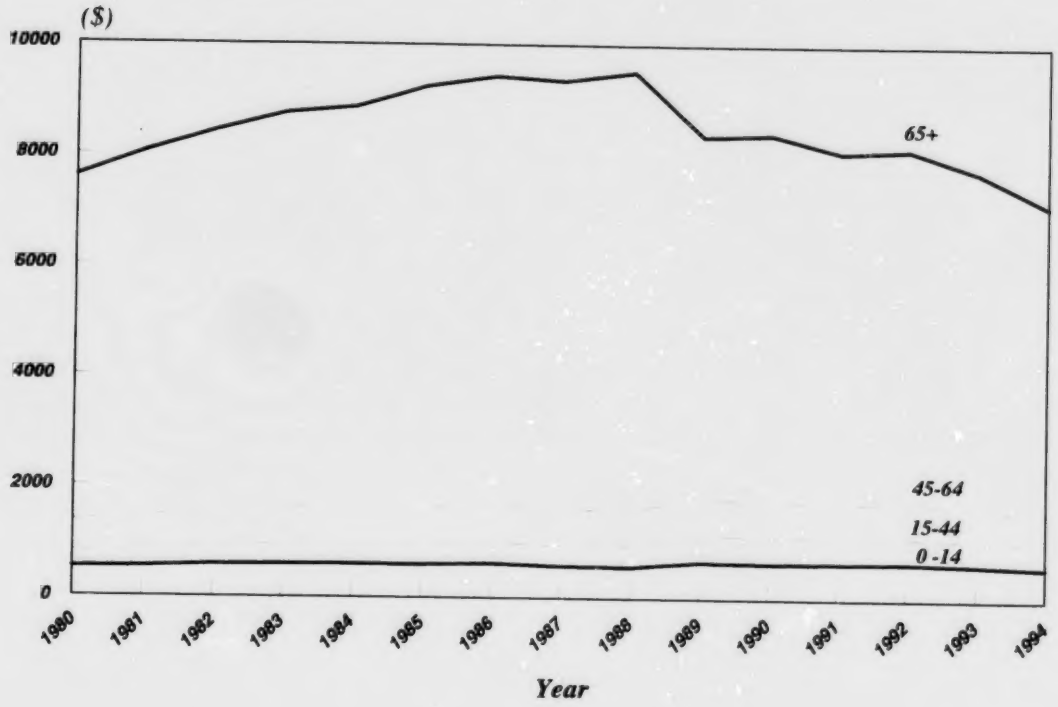
Percentage Distribution of Provincial Government Health Expenditures and Alberta Population Among Selected Age Groups



Real per capita health expenditures were also significantly higher for seniors. In 1980, they were $7,598 for seniors as compared to $524 for children, $817 for the 15-44 age group, and $1,336 for the 45-64 age group. Real per capita health expenditures peaked in 1992 to maximums of $8,130 and $665 for seniors and children, respectively. For other groups downward trends were also observed with minor fluctuations. The rates declined significantly for all age groups from 1993 to 1994 due to health reforms (see Figure G). Similar trends can be observed for the real per capita health expenditures for males and females for the selected age groups (see Appendix II, Tables 3A to 3E for nominal rates and Appendix III, Tables 3A to 3E for real rates).

Figure - G

Real Per Capita Provincial Government Health Expenditures by Age Group (In 1994 Dollars)



III. MAJOR FACTORS AFFECTING THE GROWTH OF TOTAL PROVINCIAL HEALTH EXPENDITURES

It is well known that various factors influence year to year changes in the total provincial health expenditures from both the demand and supply sides of the health care industry. Neither all the determinants of health nor the data on each indicator are available for a complete health care model. However, the impact of changes in the major factors (population, price and health resources per capita) on the total provincial health expenditures can be measured with reasonable accuracy. This section of the report analyses the impacts of these factors on the total provincial health expenditures as well as on the provincial health expenditures for seniors, adults and children.

Population: The Alberta population grew at a much faster rate during the early '80s than in the late '80s and '90s. It increased by 4.7% from 1980 to 1981 and 3.2% from 1981 to 1982. Since then, population growth in Alberta has been relatively stable, with a maximum annual growth rate of 2.1% from 1989 to 1990. In recent years, it fluctuated from 1.2% (1997) to 1.5% (1993).

Price: Health care inflation has been the main factor contributing to the total provincial health expenditure growth in Alberta in the early '80s. Statistics Canada has recently developed the government health care implicit price indices (GHCPI) for the provinces and Canada which are used as measures of public sector health inflation for the respective selected provinces and Canada in this report. Public sector health inflation in Alberta grew at an average annual rate of almost 10% from 1980 to 1984 (much higher than the general inflation of around 8% during the same period). The average annual growth rate has been lower during the late '80s, (3.1% from 1985 to 1989) and the early '90s (2.2% from 1990 to 1995), reflecting trends in overall inflation. The following table shows a comparison of the health inflation growth with the general inflation growth.

Table - 6

Years	*Difference Between the Average Annual Changes in the Price Indices*		
	Public Sector Health Inflation	*General Inflation (CPI)*	*Difference*
	(%)	*(%)*	*(%)*
1980 - 84	*9.9*	*7.9*	*2.0*
1985 - 89	*3.1*	*3.6*	*-0.5*
1990 - 95	*2.2*	*2.3*	*-0.1*
1980 - 95	*4.5*	*4.4*	*0.1*

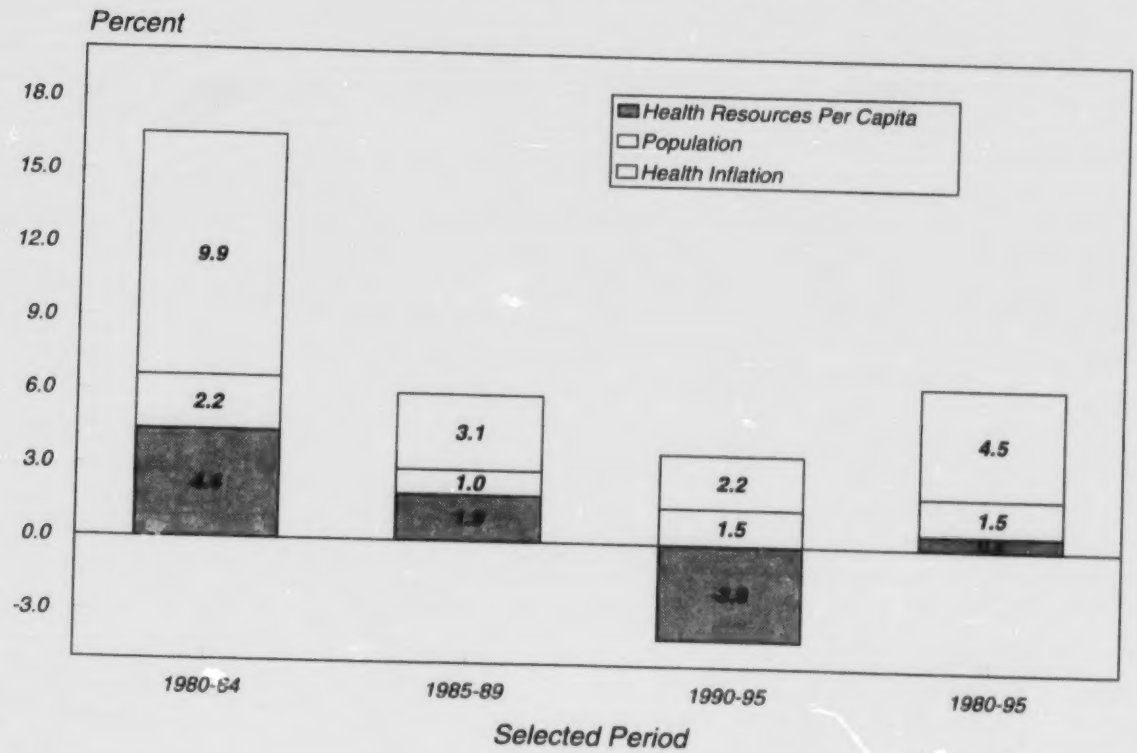
Real Per Capita Health Expenditures: Rates of change in real per capita health expenditures provide an indication of the growth or decline of health resources and are measures/trends in service utilization. Real per capita provincial health expenditures increased at an average annual rate of 4.4% during the early '80s (from 1980 to 1984) then slowed down in the late '80s. From 1985 to 1989, it only grew at a rate of 1.9% per annum (on average). Real per capita health expenditures actually declined at an average annual rate of 3.9% from 1990 to 1995. Most of this decline occurred during recent years due to health reforms in Alberta.

Relative Importance of Growth Rates

Provincial health expenditures (in current dollars) grew at an average annual compound rate of 17.1% from 1980 to 1984. During late '80s, the annual rate of growth slowed to 6.1% on average from 1985 to 1989. Provincial health expenditures, however, decreased at an average annual rate of 0.3% from 1990 to 1995. A comparison of the growth rates for the three factors and their compound effect on the overall growth of health expenditures for the same periods are shown in Figure H.

Figure - H

Average Annual Growth Rates of Major Factors - for the Selected Periods



These main components of growth are influenced by other circumstances and by interactions that are sometimes complex. For example, changes in the composition of the population, or changes in the incidence of specific diseases, influence the utilization of health care. These interrelationships are difficult to measure with aggregate data, and are usually the subject of special research studies.

A comparison of the average annual growth rates of population, public sector health inflation and health resources per capita (in 1994 constant dollars) by age cohort is presented in Table 7 for the selected periods.

Table - 7

Periods	***Average Annual Growth Rates of Factors Affecting the Growth of Provincial Health Expenditures by Age Group***			
	Provincial Health Expenditures (%)	*Population (%)*	*Public Sector Health Inflation (%)*	*Health Resources Per Capita (%)*
	0-14			
1980 - 84	*15.1*	*1.5*	*9.9*	*3.2*
1985 - 89	*6.7*	*0.8*	*3.1*	*2.6*
1990 - 94	*1.2*	*1.0*	*2.2*	*-2.2*
1980 - 94	*6.8*	*1.1*	*4.5*	*0.8*
	15-44			
1980 - 84	*17.0*	*2.4*	*9.9*	*4.1*
1985 - 89	*7.7*	*0.3*	*3.1*	*3.0*
1990 - 94	*-0.5*	*1.0*	*2.2*	*-3.5*
1980 - 94	*7.4*	*1.1*	*4.5*	*1.4*
	45-64			
1980 - 84	*17.4*	*2.1*	*9.9*	*4.7*
1985 - 89	*7.6*	*1.9*	*3.1*	*2.4*
1990 - 94	*1.9*	*3.7*	*2.2*	*-4.1*
1980 - 94	*8.1*	*2.5*	*4.5*	*-0.7*
	65 and Older			
1980 - 84	*17.6*	*3.0*	*9.9*	*3.9*
1985 - 89	*4.3*	*3.7*	*3.1*	*-2.5*
1990 - 94	*1.7*	*3.5*	*2.2*	*-4.1*
1980 - 94	*7.9*	*3.5*	*4.5*	*-0.5*

Factor analysis of health expenditure data by age group shows that after the price factor, population was the major factor affecting the growth of provincial health expenditures for all age groups. The rate of growth of the population differed significantly from one age group to another from 1980 to 1994. In turn, these trends have affected the respective age groups' health expenditures differently. The number of younger Albertans grew at a slower rate than the elderly population. During this period, the average annual rates of growth were only 1.1% for 0-14 and 15-44 age groups as compared to 2.5% for the 45-64 age group, and 3.5% for seniors.

IV. ECONOMIC IMPACT OF AN AGING POPULATION ON PROVINCIAL HEALTH EXPENDITURES

Alberta population has been steadily aging for over the last two decades. The median age of Albertans increased from 26.7 years in 1980 to 32.4 years in 1994. This chapter provides the economic impact due solely to population aging on provincial health expenditures between 1980 and 1994 by gender.

In order to isolate the impact of aging on health spending, annual expenditure estimates were calculated with all factors kept constant besides the population age-structure. These measures were derived as follows:

$$Expenditures_t = Population_{1994} * \Sigma_{Age/Sex\ Cohorts}\ Cohort\ Per\ Capita\ Health\ Expenditures_{1994} * Cohort\ Weight_t$$

where $weight_t$ equals the share of total population represented by a cohort. In the above specification, only the weights are allowed to vary by year [1] as utililization rates per cohort and population are held constant at their 1994 levels. As a result, changes in health expenditures occurring in the above formulation will represent solely the effects of population aging.

A. Methodology

Step 1 Per capita real provincial health expenditures for 1994 are calculated by applying 1994 population weights for the age cohorts: 0-14, 15-44, 45-64 and 65 years and older, on the real per capita expenditures for 1994 for the respective age groups.

Step 2 Per capita real provincial health expenditures for 1994 are estimated by applying 1980 population weights for the age cohorts: 0-14, 15-44, 45-64 and 65 years and older, on the real per capita expenditures for 1994 for the respective age groups.

Step 3 Total real provincial health expenditures for 1994 are calculated by multiplying total Alberta population for 1994 with:

a) 1994 per capita real health expenditures based on 1994 population weights as calculated in Step 1.

b) 1994 per capita real health expenditures based on 1980 population weights as estimated in Step 2.

Step 4 Total economic impact due solely to population aging from 1980 to 1994 is estimated by subtracting the total provincial health expenditure for 1994 based on 1994 population weights (as calculated in Step 3a) from the total provincial health expenditures for 1994 based on 1980 population weights (as estimated in Step 3b). The average annual economic impact is estimated by dividing the total impact with the number of years (16).

Note: Economic impacts of aging population for males and females are calculated similarly based on the respective gender's per capita real provincial health expenditures and population weights by age cohorts.

[1] This formulation is often referred to in the economics literature as a Paasche Index.

B. Analysis

Table 8 shows that average annual compound growth in real provincial health expenditures due solely to population aging was 0.7% from 1980 to 1994. This growth translates to an increase of $25.7 million on the provincial health spending each year from 1980 to 1994 ($10.8 million due to the male and $14.9 million due to the female population). The age related average annual impact on health expenditures was $9.45 per person ($7.89 per male and $11.04 per female) during the reported period.

Table - 8

Economic Impact Due Solely to Population Aging from 1980 to 1994 - by Gender			
	Males	***Females***	***Total***
- Average Annual Increase in Real Health Expenditures ($ 1994 Million)	*10.8*	*14.9*	*25.7*
- Average Annual Increase in Real Per Capita Health Expenditures ($ 1994)	*7.89*	*11.04*	*9.45*
- Average Annual Compound Growth Rate (%)	*0.66*	*0.69*	*0.68*

Statistics Canada's population projections (Series 2) show that the composition of the Alberta population will be rapidly shifting towards more senior groups as the baby boom ages. The median age of the Alberta population is expected to increase by 18.8% from 1994 (32.4 years) to 2016 (38.5 years). During this period, population aging is expected to lead to an additional $40.6 million (in 1994 constant dollars) required each year for the provincial health care budget. This translates to an additional $15 per capita in health expenditures each year from 1994 to 2016 due to population aging.

It is important to remember that population aging does not represent the complete picture with respect to health care expenditure requirements. Other important factors as explained in Chapter III are population, health inflation and real per capita expenditures by cohort which represent service utilization. Population aging is, however, beyond the control of governments. Given the rapid escalation of health expenditures as a person enters his/her senior years, governments must start planning to meet these expenditures.

V. INTERPROVINCIAL COMPARISON

This chapter highlights Alberta's position in comparison with Ontario, Manitoba, Saskatchewan, British Columbia and Canada. Section A provides a comparison of growth rates of provincial health expenditures both in terms of current and 1994 constant dollars. Section B compares the proportion of health share of the total provincial financial resources in real term (in 1994 dollars). Section C compares age-sex standardized real per capita health expenditures among the selected provinces and Canada. Per capita real rates were also compared by gender (standardized) and by age-group in this section. Section D provides an interprovincial comparison of the distribution of population and distribution of health expenditures among seniors, adults and children. Section E analyses the average annual growth rates of major factors (population, price and utilization) affecting the growth of provincial health expenditures.

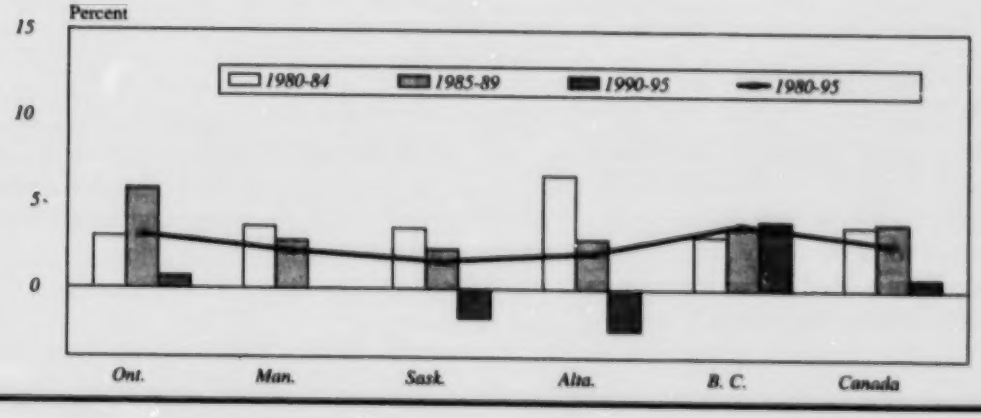
A. Total Provincial Health Expenditures

Provincial health expenditures (in current dollars) in Canada grew at an average annual rate of 7.8% from 1980 to 1995. During this period, the Alberta rate (6.8%) was 1.0% below the national average and second lowest after Saskatchewan (6.6%) when compared with the growth rates of other selected provinces. The average annual growth rate was the highest for Ontario (9.0%), followed by British Columbia (8.7%), Manitoba (7.2%) and other selected provinces. During 1996 and 1997, provincial health expenditures are expected to stay more or less at the 1995 level for all the selected provinces except for British Columbia, where it is forecast to grow by 2.2% annually on average.

Figure I shows an interprovincial comparison of changes in the real provincial health expenditures for the selected periods. As public sector health specific inflation differs from province to province, it is necessary to compare provincial health expenditures in real terms by removing the price effect. The government health care implicit price indices (GHCPI) have recently been developed for all provinces by Statistics Canada. Real provincial health expenditures are calculated in 1994 dollars by deflating the nominal health expenditures with the respective provinces' GHCPI deflators.

Figure - I

Average Annual Growth Rates of Provincial Health Expenditures for the Selected Periods (In 1994 Dollars)



It is interesting to note that the trends in real provincial health expenditures differ significantly from province to province. During the early '80s, real provincial health expenditures grew the most in Alberta and the least in Ontario and British Columbia (see Figure I). During the late '80s, the growth rate decelerated in Alberta to 2.9% per annum on average, while the average annual growth rate accelerated in Ontario to 5.8% from 1985 to 1989.

From 1990 to 1995, real provincial health expenditures declined in Alberta and Saskatchewan with average annual decreases of 2.4% and 1.7%, respectively. During this period, real provincial health expenditures increased at an average annual rate of 4.0% in British Columbia but slowed down in all other provinces and Canada. This pattern suggests that due to the budget pressures and cost inefficiencies, most of the provinces introduced health reforms during this time frame. However, the Alberta government had undertaken substantial reforms whereas other provinces had done so only partially or just started.

B. Health Share of Total Provincial Financial Resources

Table 10 shows that the Alberta government spent the least financial resources on health care out of total resources when compared with Canada and other selected provinces during most of the reported years. For Alberta, real health expenditure as a percentage of real GDP ranged from 4.8% to 6.1% from 1981 to 1995. During most of the reported years, Saskatchewan spent the most (6.6% - 7.8%), followed by Manitoba (6.8% - 7.5%), British Columbia (5.5% - 6.8%), and Ontario (5.4% - 6.1%).

Table - 9

Real Provincial Health Expenditures as a Percentage of Real GDP (In 1994 Dollars)						
	Canada	*Ontario*	*Manitoba*	*Saskatchewan*	*Alberta*	*British Columbia*
1981	*6.1*	*5.6*	*6.8*	*6.9*	*5.2*	*5.5*
1985	*6.2*	*5.4*	*6.8*	*7.8*	*5.9*	*6.0*
1990	*6.6*	*6.1*	*7.3*	*7.5*	*6.1*	*6.5*
1993	*6.8*	*6.5*	*7.5*	*6.7*	*5.8*	*6.8*
1994	*6.5*	*6.2*	*7.3*	*6.6*	*5.2*	*6.8*
1995	*6.3*	*5.9*	*7.2*	*6.6*	*4.8*	*6.8*

Real provincial health expenditures as a percentage of real GDP increased from 1980 to 1993 and then declined from 1993 to 1995 for most of the selected provinces (see Table 9). These patterns can be partially related to the continuous decrease in the federal cash contributions for health related services and provincial health reforms, and partially due to the denominator effect. For example, during the '80s and early '90s recession period, GDP was lower, and health expenditures accounted for a relatively larger share of GDP. It did not return to the previous proportion when the economy started to recover in recent years. Health expenditures as a percentage of GDP is a somewhat misleading indicator due to this phenomenon.

Real provincial health expenditures as a percentage of the real provincial government's total program expenditures were the highest for Ontario and the lowest for Alberta among the selected provinces and Canada from 1980 to 1995. On average, the Alberta government annually spent 27.7% of the total program expenditures on the health of Albertans (5.7% points lower than the national average of 33.4%). Among other selected provinces, the average annual health care proportions were 38.7% for Ontario; 34.7% for Manitoba; 33.7% for British Columbia; and 31.9% for Saskatchewan (for trends, see Appendix III, Table I).

From 1980 to the early '90s, real provincial health expenditures as a percentage of real provincial governments' total program expenditures increased in all of the selected provinces (except in British Columbia) and then either dropped, stabilized or increased in the late '90s. This indicates that different health expenditure patterns are emerging and health expenditure controls by provincial governments have occurred across Canada at varied degrees.

C. Per Capita Provincial Health Expenditures by Gender and by Age Group

A comparison of the real per capita provincial health expenditures shows that the Alberta government had the highest average spending per resident as compared to other selected provinces and Canada during most parts of the '80s. However, in the '90s, real per capita expenditures were higher in British Columbia and Ontario than in Alberta (see Appendix III, Table 2).

The above interprovincial comparison of the real per capita health expenditures is, however, biased due to differences in the age and sex distribution of the population from province to province (see Appendix V, Table 2). Therefore, it is important to remove this bias by standardizing the rates before comparing the provincial per capita expenditure rates. The rates for the selected provinces and Canada are standardized based on Alberta population weights for both sexes for each of the reported years and are presented below.

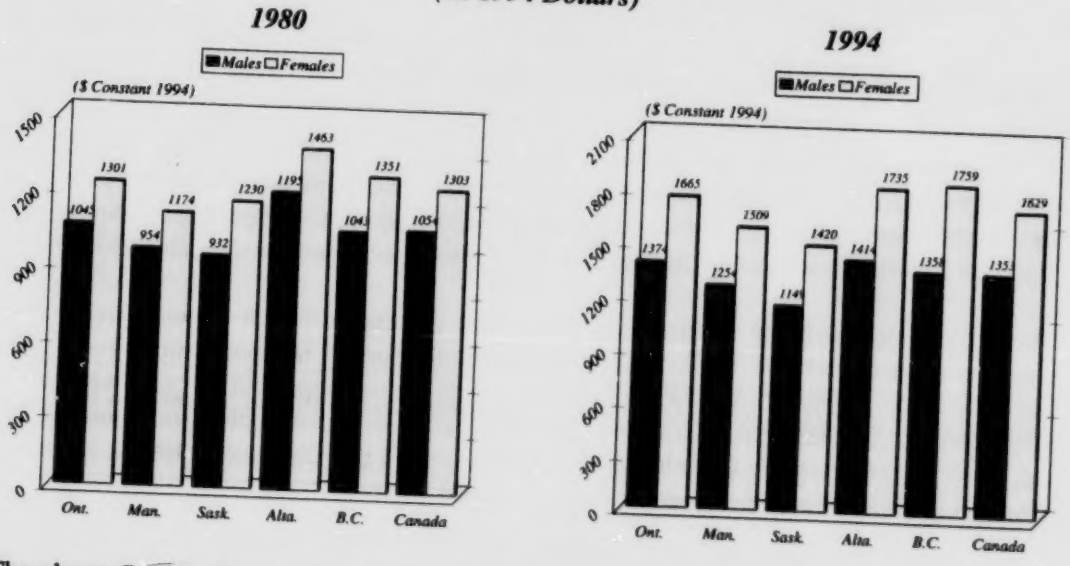
Table - 10

Age-Sex Standardized Real Per Capita Provincial Health Expenditures (In 1994 Dollars) Based on Alberta Population Weights						
	Canada	*Ontario*	*Manitoba*	*Saskatchewan*	*Alberta*	*British Columbia*
1980	*1,182*	*1,178*	*1,065*	*1,080*	*1,327*	*1,202*
1985	*1,313*	*1,266*	*1,201*	*1,239*	*1,621*	*1,264*
1990	*1,501*	*1,536*	*1,386*	*1,417*	*1,771*	*1,431*
1991	*1,547*	*1,624*	*1,361*	*1,401*	*1,734*	*1,472*
1992	*1,546*	*1,629*	*1,371*	*1,326*	*1,759*	*1,494*
1993	*1,502*	*1,551*	*1,376*	*1,252*	*1,689*	*1,549*
1994	*1,496*	*1,525*	*1,383*	*1,288*	*1,574*	*1,571*

It is interesting to note that among the selected provinces and Canada, when the effect of provincial population structure differences was removed, standardized real per capita health expenditures were the highest in Alberta during the '90s as well as the '80s, although real per capita health expenditures started declining after 1992 due to health reforms in Alberta.

In Alberta and Ontario, similar trends in the age-sex standardized real per capita health expenditures were observed. The rates increased continuously from 1980 to 1992 and then started declining. In British Columbia, however, the per capita expenditures increased steadily throughout the reported period. This narrowed the gap between Alberta and British Columbia real per capita expenditures. In 1994, British Columbia was the second highest ($1,571) after Alberta ($1,574).

Figure - J
Age-Sex Standardized Real Per Capita Provincial Health Expenditures by Gender
(In 1994 Dollars)



The above figures show a comparison of age-sex standardized real per capita health expenditures for males and females for 1980 and 1994. Among the selected provinces and Canada, real per capita health expenditures for both genders were the highest for Alberta during 1980. In 1994, real per capita male expenditures were still the highest for Alberta, while the per capita female real health expenditures for British Columbia slightly exceeded the Alberta rate.

Real per capita expenditures for females were higher than for males across Canada. Utilization of more health services during childbearing age is one (but not all) of the reasons for higher expenditures on females in all the provinces and Canada. The trend analysis of health expenditures for non-childbearing age groups also shows higher expenditures for females, for seniors, and for the 45-64 age groups across Canada, throughout the reported period. Although the evidence is not complete, studies suggest that women appear to be more susceptible to chronic conditions in later life and thus have higher per capita expenditures than men in the same age group.

Table - 11

Year	*Real Per Capita Provincial Health Expenditures by Age Group (In 1994 Dollars)*					
	Canada	*Ontario*	*Manitoba*	*Saskatchewan*	*Alberta*	*British Columbia*
	0-14					
	($)	*($)*	*($)*	*($)*	*($)*	*($)*
1980	*494*	*472*	*436*	*549*	*524*	*503*
1990	*568*	*573*	*485*	*581*	*642*	*524*
1993	*536*	*535*	*455*	*488*	*632*	*502*
1994	*519*	*512*	*448*	*496*	*588*	*497*
	15-44					
1980	*781*	*821*	*702*	*784*	*817*	*827*
1990	*952*	*989*	*886*	*979*	*1,147*	*933*
1993	*932*	*998*	*874*	*834*	*1,071*	*962*
1994	*924*	*963*	*883*	*849*	*994*	*976*
	45-64					
1980	*1,383*	*1,409*	*1,256*	*1,277*	*1,366*	*1,240*
1990	*1,579*	*1,632*	*1,425*	*1,504*	*1,779*	*1,341*
1993	*1,508*	*1,576*	*1,328*	*1,271*	*1,643*	*1,324*
1994	*1,461*	*1,508*	*1,300*	*1,275*	*1,502*	*1,313*
	65 and Older					
1980	*5,917*	*5,592*	*5,319*	*4,551*	*7,598*	*6,150*
1990	*7,029*	*7,096*	*6,624*	*6,033*	*8,400*	*6,923*
1993	*7,010*	*7,108*	*6,455*	*5,358*	*7,720*	*7,731*
1994	*6,896*	*6,942*	*6,401*	*5,507*	*7,112*	*7,759*

Table 11 shows that in 1980, real per capita health expenditures were the highest for Alberta for seniors ($7,598) when compared with the other selected provinces and national rates. Saskatchewan spent the most on children, and Ontario and British Columbia spent more on adults among the selected provinces during this year. From 1980 to 1993, real per capita health expenditures grew for most age groups across Canada. However, from 1993 to 1994, they declined for all age groups in Canada except for seniors and adults in British Columbia and for all age groups in Saskatchewan. A sharp decline in real per capita health expenditures for Alberta seniors ranked Alberta second highest after British Columbia in 1994.

Expenditures on seniors' health relative to what was spent by the provincial governments on the health of the non-senior population is presented in Table 12 below.

Table - 12

Per Capita Relative Health Expenditures for Seniors (65+) 0-64=100				
	1980	*1990*	*1993*	*1994*
Canada	*709*	*705*	*722*	*722*
Ontario	*647*	*686*	*702*	*704*
Manitoba	*705*	*738*	*744*	*738*
Saskatchewan	*551*	*618*	*644*	*652*
Alberta	*909*	*741*	*720*	*716*
British Columbia	*734*	*744*	*820*	*818*

In 1980, Alberta government spent nine times more on the health of seniors than on non-seniors. In comparison to Canada and other selected provinces, Alberta ranked the highest during this year. However, the proportion declined in Alberta from nine times in 1980 to seven in 1994. Contrary to the Alberta situation, increasing trends were observed in Ontario and Saskatchewan in the proportion of health expenditures for seniors versus non-seniors. British Columbia and Manitoba trends peaked in 1993 and then declined slightly in 1994.

D. Distribution of Health Expenditures and Population by Age Group

Table 13 below shows comparative distributions of population and health expenditures for the selected provinces and Canada for 1980 and 1994. Distribution of population indicates that Saskatchewan, Manitoba and British Columbia have relatively more seniors than other selected provinces throughout the period of 1980 to 1994. Over this period, there was a gradual shift in the distribution of population and health expenditures from a younger to an older population in most of the selected provinces and Canada. Overall, the median age of Canadians increased from 29.1 years in 1980 to 34.4 in 1994 and is expected to increase to 40.4 years in 2016 due to the aging of the baby boomers.

In Alberta, the proportion of seniors was 7.3% in 1980, the lowest among the selected provinces and 2.1% points lower than the national proportion. Regardless of the lower proportion of senior population, Alberta spent almost the same proportion of the total provincial health expenditures on seniors as Canada (42%) during that year. In recent years, however, the Alberta situation has changed. In 1994, Alberta spent a relatively lower (42.9%) proportion of total provincial health expenditures on seniors than the national proportion of 49.3% and the lowest when compared with the proportions of other selected provinces.

Overall, 42% to 49% of provincial health expenditures were allocated on the health of seniors in Canada, who accounted for 9% to 12% of the total population from 1980 to 1994. On the other hand, 6% to 9% of the total health expenditures were spent on children who represented 20% to 23% of the total Canadians during the reported period. Similar trends were observed in each of the selected provinces (see Appendix V, Table 1).

Table - 13

Selected Provinces	***Distribution of Population***				***Distribution of Prov. Health Expenditures***			
	0-14	*15-44*	*45-64*	*65+*	*0-14*	*15-44*	*45-64*	*65+*
	(%)	*(%)*	*(%)*	*(%)*	*(%)*	*(%)*	*(%)*	*(%)*
1980								
Ontario	*22.1*	*48.4*	*19.8*	*9.7*	*7.9*	*30.0*	*21.1*	*41.0*
Manitoba	*23.5*	*45.9*	*19.2*	*11.5*	*8.0*	*25.4*	*18.8*	*47.9*
Saskatchewan	*24.3*	*44.4*	*19.1*	*11.7*	*10.8*	*27.6*	*19.3*	*42.3*
Alberta	*24.3*	*52.3*	*16.1*	*7.3*	*9.6*	*32.2*	*16.6*	*41.6*
British Columbia	*21.5*	*48.7*	*19.1*	*10.5*	*7.7*	*28.8*	*17.1*	*46.3*
Canada	*22.7*	*49.0*	*18.9*	*9.4*	*8.6*	*29.2*	*19.9*	*42.3*
1994								
Ontario	*20.2*	*47.2*	*20.6*	*12.0*	*6.1*	*26.7*	*18.3*	*48.9*
Manitoba	*21.7*	*45.6*	*19.2*	*13.5*	*6.0*	*24.9*	*15.4*	*53.6*
Saskatchewan	*23.3*	*43.9*	*18.4*	*14.4*	*7.6*	*24.6*	*15.4*	*52.4*
Alberta	*23.0*	*49.1*	*18.4*	*9.5*	*8.6*	*31.0*	*17.5*	*42.9*
British Columbia	*19.7*	*46.8*	*21.0*	*12.7*	*5.4*	*25.2*	*15.1*	*54.4*
Canada	*20.4*	*47.2*	*20.5*	*11.9*	*6.4*	*26.3*	*18.1*	*49.3*

E. Major Factors Affecting the Growth of Provincial Health Expenditures

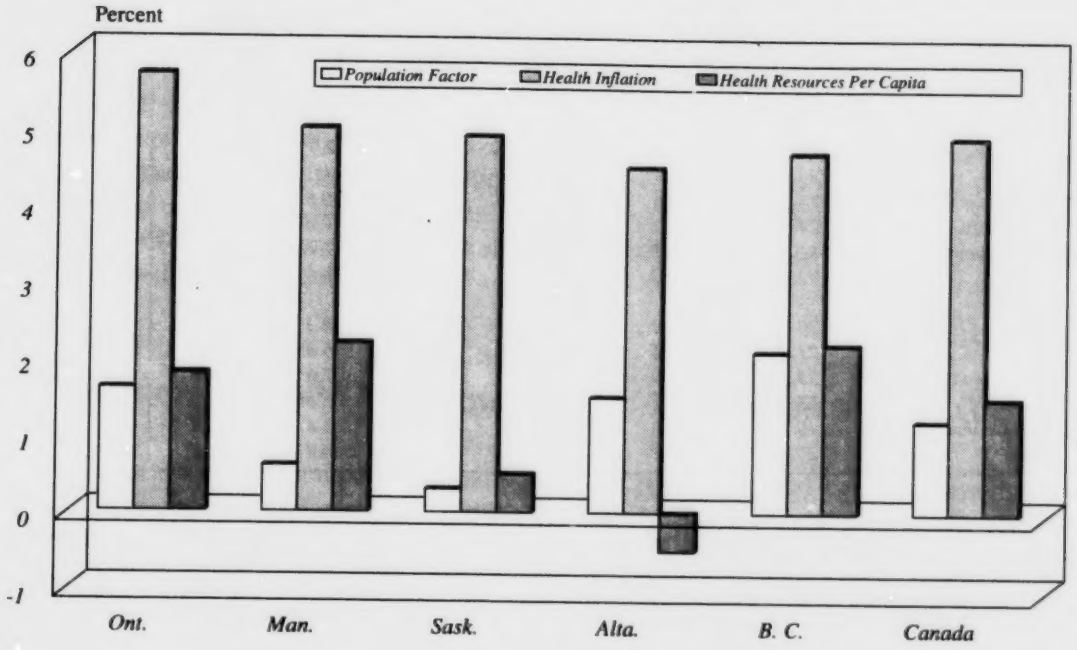
As discussed in Chapter III of the report, population, health inflation and real per capita health resources are major determinants of total provincial health expenditures. An interprovincial comparison of average annual growth rates of these factors from 1980 to 1995 shows that population increased fastest in British Columbia (2.1%), followed by Ontario (1.6%), and Alberta (1.5%).

During this period, public sector health inflation (GHCPI) grew the most in Ontario (5.7%) and the least in Alberta (4.5%). Alberta's inflation rate was 0.4 percentage points lower than the national average of 4.9%. Public sector health inflation grew much faster than the consumer price indices in Canada and in all of the selected provinces (except in British Columbia) from 1980 to 1994. In British Columbia, the consumer price index increased with an average annual rate of 5.0%, while the GHCPI increased by 4.7% per annum on average (see Appendix IV, Table 1).

Figure K shows that the average annual growth rates of real per capita health expenditures (i.e. health services utilization) were higher in British Columbia (2.2%) and Manitoba (2.2%) than in Ontario (1.8%) and Saskatchewan (0.5%). During this period, health services utilization decreased in Alberta at an average annual rate of 0.5%.

Figure - K

Average Annual Growth Rates of Major Factors Affecting the Growth of Provincial Health Expenditures from 1980 to 1994



VI. INTERNATIONAL COMPARISON

This chapter highlights Alberta's position in comparison with Canada and other countries (for which data are available) in terms of: total health expenditures (public and private) as a percentage of GDP, distribution of population and health expenditures between seniors and non-seniors, and per capita total health expenditures on seniors in relation to non-seniors.

A. Health Share of Total Financial Resources

Despite a wide variation in the structure and organization of the health systems within the G - 7 countries, a general trend is observed, that is, health expenditures during the period 1981 to 1993 accounted for a rising share of GDP in most of the member countries. The United States has consistently had the highest health expenditures as a percentage of GDP in comparison with the other selected countries and Alberta. From 1990 to 1993, Canada ranked second only to the U.S. In the years prior to 1990, Canada's health expenditures as a percentage of GDP were fairly consistent with Germany and France. Japan and the U.K. spent the least on health as a percentage of GDP among all of the selected countries throughout the reported period (see Table 14).

In Alberta, total health spending increased from 5.1% of GDP in 1981, to 9.2% in 1992. In recent years, the percentage dropped continuously from 8.6% in 1993 to 7.2% in 1996. This appears to be consistent with the national trends in health spending. During this period, health expenditures as a percentage of GDP decreased in Italy, stabilized in the U.K., France and the U.S., and increased in Germany and Japan.

Table - 14

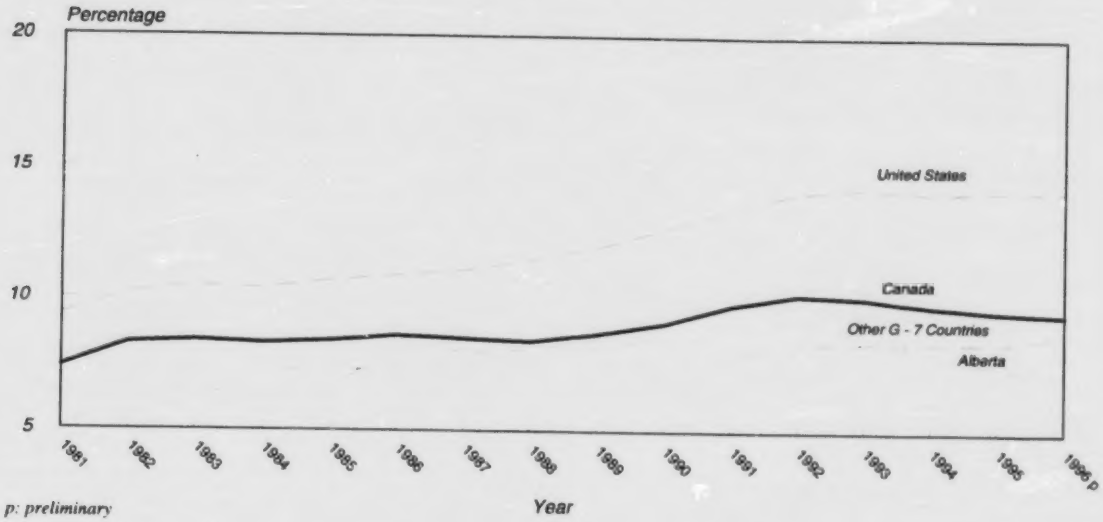
Total Health Expenditures as a Percentage of the GDP for Alberta, Canada and Other G - 7 Countries

Year	1981	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996 p
Alberta	5.1	6.6	8.2	8.0	8.1	8.5	8.3	8.8	9.2	8.6	7.9	7.5	7.2
Canada	7.4	8.4	8.6	8.5	8.4	8.7	9.1	9.8	10.2	10.1	9.8	9.6	9.5
U.S.	9.4	10.7	10.9	11.1	11.5	12.0	12.7	13.5	14.1	14.3	14.1	14.2	14.2
France	7.9	8.5	8.5	8.5	8.6	8.7	8.9	9.1	9.4	9.8	9.7	9.9	9.6
Germany	8.4	8.5	8.4	8.4	8.6	8.1	8.2	9.6	10.2	10.1	10.3	10.4	10.5
Italy	6.9	7.1	7.0	7.4	7.6	7.6	8.1	8.4	8.5	8.6	8.4	7.7	7.6
Japan	6.5	6.7	6.6	6.6	6.3	6.1	6.0	6.0	6.3	6.6	6.9	7.2	n/a
U.K.	5.9	5.9	5.9	5.9	5.8	5.8	6.0	6.5	6.9	6.9	6.9	6.9	6.9

p: preliminary
n/a: not available

Figure L shows a comparison of trends for the ratios of total health expenditures to GDP from 1981 to 1996 for Alberta, Canada, United States, and the average ratio for the other G - 7 countries. As explained above, the United States experienced consistently higher rates of growth in the ratio of total health expenditures to GDP than the other G - 7 countries from 1981 to 1985. Canada ranked the second highest when ratios for other G - 7 countries were combined in Figure L. The Alberta ratio was significantly lower than the United States and Canada ratios throughout the reported period and lower than other G - 7 countries' combined ratios during 1981 to 1985 and 1993 to 1996. However, during the late '80s and early '90s (1986 to 1993), Alberta's ratios were higher than the combined ratios of other G - 7 countries.

Figure - L
Total Health Expenditures (Public and Private) as a Percentage of GDP for Alberta and G - 7 Countries



p: preliminary

The period 1981 to 1994 can be characterized as a period of world wide economic turbulence/recession. Part of the increase in health expenditures as a percentage of GDP (during that period) is a reflection of the denominator effect. For example, during a recession, GDP is lower, and health expenditures account for a relatively larger share of GDP. Generally the ratio does not return to the previous proportion when the economy starts to recover. This can sometimes make health expenditures as a percentage of GDP a somewhat misleading indicator of how health expenditures are moving.

B. Distribution of Health Expenditures and Population by Age Group

Data on the distribution of health expenditures and population by age group were recently collected by the OECD for numerous countries. Although, there are methodological differences in estimating such data from country to country (see Appendix I for data sources) as well as differences due to varied health care systems, this data provides a rough international comparison of proportions of health expenditures spent by the respective countries on their seniors and non-seniors (see Table 15).

Table - *15*

Distribution of Total Health Expenditures and Population Among Age Groups-1993 (%)						
	Age Group 0-64		*Age Group 65+*		*Age Group 75+*	
	Population	*Expenditure*	*Population*	*Expenditure*	*Population*	*Expenditure*
Alberta	*90.7*	*57.5 **	*9.3 (13)*	*42.5 * (3)*	*n/a*	*n/a*
Canada	*88.3*	*51.1 **	*11.7 (10)*	*48.9 * (1)*	*n/a*	*n/a*
United States	*87.3*	*62.8*	*12.7 (9)*	*37.2 (9)*	*5.4*	*20.7*
Japan	*86.5*	*57.1*	*13.5 (7)*	*42.9 (2)*	*8.7 ***	*33.1 ***
Germany	*84.9*	*67.7*	*15.1 (3)*	*32.3 (13)*	*6.5*	*16.5*
United Kingdom	*84.4*	*58.0*	*15.6 (2)*	*42.0 (4)*	*6.8*	*27.1*
Australia	*88.5*	*65.5*	*11.5 (11)*	*34.5 (11)*	*4.5*	*20.1*
Finland	*86.2*	*61.5*	*13.8 (5)*	*38.5 (7)*	*5.7*	*22.1*
Netherlands	*86.9*	*60.1*	*13.1 (8)*	*39.9 (5)*	*n/a*	*n/a*
New Zealand	*88.7*	*67.0*	*11.3 (12)*	*33.0 (12)*	*4.6*	*21.2*
Portugal	*86.3*	*64.1*	*13.7 (6)*	*35.9 (10)*	*5.4*	*18.7*
Sweden	*82.5*	*62.2*	*17.5 (1)*	*37.8 (8)*	*8.1*	*21.4*
Switzerland	*85.7*	*60.1*	*14.3 (4)*	*39.9 (5)*	*6.5*	*26.0*

** provincial health expenditures , ** refers to 70+ population instead of 75+ and n/a not available*

Table 15 indicates that the proportion of seniors in Canada was third lowest (11.7%), after Australia (11.5%) and New Zealand (11.3%) in 1993; nevertheless, Canada spent the highest proportion of health expenditures on seniors (48.9%) among the selected countries. Sweden, with the highest proportion (17.5%) of seniors, spent only 37.8% of total health expenditures on seniors, more than 10 percentage points lower than Canada.

In Alberta, the proportion of seniors was 9.3% in 1993, the lowest when compared with the proportions of the OECD countries including Canada. Regardless of its relatively younger population, Alberta spent 42.5% of total health expenditures on seniors.

One would expect that countries with larger proportions of seniors would spend larger proportions of their health dollars on seniors. This is not always the case. Canada, Japan, and Alberta ranked first, second, and third, respectively in proportion of health dollars spent on seniors, while they ranked tenth, seventh, and thirteenth respectively in terms of population aged 65 and over. Germany spent the lowest proportion of health dollars on seniors, while its proportion of seniors was 15.1%, ranking it third among the selected countries/provinces.

C. Per Capita Health Expenditures by Age Group

Table 16 shows per capita health expenditures on seniors in relation to the per capita health expenditures on non-seniors for Alberta, Canada and other selected countries for which data are available either for 1993 or for 1994 from the OECD.

Table - 16

Per Capita Relative Health Expenditures by Age Group (0 - 64 = 100)				
	Year	*Age Group 65- 74*	*Age Group 65+*	*Age Group 75+*
Alberta *	*1994*	*n/a*	*714*	*n/a*
Canada *	*1994*	*n/a*	*721*	*n/a*
Japan **	*1993*	*309*	*479*	*573*
Germany	*1994*	*234*	*268*	*317*
United Kingdom @	*1993*	*254*	*388*	*559*
Netherlands	*1994*	*n/a*	*442*	*n/a*
New Zealand	*1994*	*233*	*388*	*616*

*n/a not available, * refers to provincial health data, ** refers to 65-69, 65+, 70+, and @ refers to England data*

In Alberta and Canada, health expenditures for those 65 and over are seven times larger than for those under age 65. These ratios are significantly higher as compared to other selected countries' ratios (see Table 16). This is mainly due to a more comprehensive coverage under the publicly funded health care system in Alberta and Canada. The proportions are significantly lower for Netherlands and Germany, where only minor parts of long term care for seniors are included in public health care schemes.

It is important to keep in mind the conceptual difficulties that arise in making international comparisons of health expenditures due to regional differences. These differences include population density/distribution, cultural attitudes towards health and family care, birth and death rates, incidence of morbidity, climate and other environmental factors, public and private insurance coverage, medical practice patterns including the use of health technologies, efficiency and administration costs.

APPENDICES

APPENDIX I : *Data Sources, Definitions and Notes*

APPENDIX II : *Provincial Health Expenditures Data, for the Selected Provinces and Canada (In Current Dollars)*

APPENDIX III : *Provincial Health Expenditures Data, for the Selected Provinces and Canada (In 1994 Dollars)*

APPENDIX IV : *Price Indices for the Selected Provinces and Canada*

APPENDIX V : *Distribution of Provincial Health Expenditures and Population Among Age Groups For the Selected Provinces and Canada*

APPENDIX I

DATA SOURCES, NOTES, AND DEFINITIONS

APPENDIX I

DATA SOURCES

1. Health Canada, "National Health Expenditures in Canada 1975-1994 - Full Report", January 1996.

2. Canadian Institution for Health Information (CIHI), "National Health Expenditure Trends - 1975 to 1997", December 1997.

The following data sources were used by Health Canada and CIHI for the preparation of the data used in this report for the provincial health expenditures, economic, and demographic data:

Provincial Health Expenditures

- Provincial Public Accounts and Main Estimates
- Provincial Departments of Health Annual Reports and Statistical Supplements where available
- Annual Reports of various foundations, agencies and commissions
- Special tabulations and specific information from various provincial departments reporting health expenditures

Economic and Demographic Data

- Gross Domestic Product
  - 1980 to 1996 - Statistics Canada, National Accounts and Environment Division
  - 1997 - Conference Board of Canada (GDP growth rates)
- Population Data - Statistics Canada, Population Demography Division
  - "Quarterly Demographic Statistics", Statistics Canada, cat. 91-002
  - "Population Projections For Canada, Provinces and Territories - 1993 - 2016"
- Price Indices - Statistics Canada, National Accounts and Environment Division

National Data

- Organization for Economic Cooperation and Development (OECD) Health Data
- Organization for Economic Cooperation and Development, "Ageing in OECD Countries - A Critical policy Challenge" , Social Policy Studies # 20

NOTES AND DEFINITIONS

National Health Expenditures

National health expenditures in Canada are based on a system of classification that is consistent with international standards developed by the OECD for reporting of health expenditures. It includes any type of expenditure for which the primary objective is to improve or prevent the deterioration of health status being defined within the context of health determinants and their impact on health status (e.g., occupational health and safety expenditures, debt service charges, capital expenditures and sometimes items that are on the margin).

Provincial Health Expenditures

Provincial health expenditures refer to expenditures made by provincial governments for insured health services and extended health services, financed with health-related federal transfers to provinces and provincial governments' own funds.

The amount of provincial funds originating from the provincial governments' own sources and revenues was derived by subtracting federal health transfers from total provincial health expenditures.

Provincial health expenditures include expenditures on: hospitals, other institutions, physicians, other health professionals, drugs, capital, and other health spending.

Provincial Government Total Program Expenditures

Provincial government total program expenditures are defined as total government expenditures minus interest on the public debt.

Provincial governmental total program expenditures include all expenditures of provincial governments; that is, goods and services, transfers to persons, subsidies, capital assistance, transfers to other levels of governments and gross capital formation, such as defined in the *National Income and Expenditures Accounts,* Statistics Canada (cat. 13-001).

Gross Domestic Product

Gross domestic product (GDP) is the total value of goods and services produced within the boundaries of a province and is a measure of the economic growth of the province.

GDP at market prices was used in this report to express health expenditures as a percentage of GDP. However, the total for Canada was used instead of the total of all provinces. These differ because the statistical discrepancy is treated differently in the Provincial Economic Accounts (Statistics Canada, Cat. 13-213p) and the National Income and Expenditure Accounts (Cat. 13-001).

It should be noted that the measures of health expenditures as a percentage of GDP is somewhat misleading due to the denominator effect. For example, during the '80s and early '90s recession period, GDP was lower, and health expenditures accounted for a relatively larger share of GDP. It did not return to the previous proportion when the economy started to recover in recent years.

Distribution of Health Expenditures Among Age Groups and Genders

Health expenditures by age group and gender presented in this report are estimates and should be used with this in mind. The general methodology used by Health Canada was to use actual age and sex distributions of health expenditures whenever available.

When actual data was not available, the age and gender percentage distribution of an alternative variable was applied to health expenditures of the corresponding category. For example, there is no data available on hospital expenditures by age and gender of patient except in the Territories, the number of hospital days stay was used as an alternative variable. Only the territorial governments have statistics on the number of clients , services, patient-days and costs in hospitals. The analysis of these data show that the age and gender percentage distribution of hospital costs and hospital days stay is very similar, confirming that days stay is a good alternative variable for hospital costs in provinces.

When data were missing for a particular year, the age and gender percentage distribution was extrapolated on the basis of available information.

Per Capita Health Expenditures

Per capita health expenditures were calculated using the most recent revised population estimates from Statistics Canada. This revision takes into account the results of the census adjustment for net census undercount, non-permanent residents and returning Canadians.

Public Sector Health Care Price Indices

The implicit price indices for government expenditures on health care (GHCPI) are used to deflate public sector health care spending for the respective provinces and Canada in order to calculate provincial health expenditures in 1994 constant dollars. These indices have recently been developed by the National Accounts and Environment Division of Statistics Canada based on 1986 expenditures weights for the following categories:

- Hospitals - Labour Income
- Medicare Expenditure
- Hospitals - Residual (non-labour)
- Hospitals - Capital Cost Allowance

APPENDIX II

PROVINCIAL HEALTH EXPENDITURES DATA

FOR THE SELECTED PROVINCES AND CANADA

(In Current Dollars)

APPENDIX II, TABLE 1

PROVINCIAL GOVERNMENT HEALTH EXPENDITURES AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT AND PROVINCIAL GOVERNMENT TOTAL PROGRAM EXPENDITURES FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	Provincial Government Health Expenditures (In Current $Millions)					
1980	15,795.6	5,164.6	652.8	604.5	1,510.2	1,933.8
1981	18,657.7	6,069.9	782.9	709.8	1,871.3	2,377.0
1982	21,968.0	7,104.3	915.1	859.0	2,426.3	2,722.5
1983	24,456.4	8,019.2	1,021.3	965.6	2,769.4	2,934.4
1984	26,182.9	8,828.0	1,102.1	1,022.9	2,843.5	3,077.3
1985	28,146.9	9,747.9	1,182.6	1,101.3	3,035.1	3,203.1
1986	30,488.4	10,996.1	1,269.6	1,223.4	3,316.8	3,445.8
1987	32,823.7	12,204.4	1,364.8	1,264.5	3,308.1	3,665.9
1988	35,455.0	13,311.5	1,462.1	1,286.2	3,507.9	3,967.3
1989	38,955.0	14,852.2	1,578.4	1,400.5	3,851.6	4,399.8
1990	42,097.1	16,022.6	1,707.7	1,533.3	4,080.0	4,965.1
1991	45,859.5	17,821.6	1,754.9	1,595.1	4,318.7	5,526.4
1992	48,014.0	18,664.4	1,810.6	1,562.4	4,576.2	6,034.9
1993	48,390.1	18,558.5	1,808.7	1,498.6	4,518.6	6,456.4
1994	48,583.5	18,576.4	1,823.6	1,535.2	4,273.1	6,658.3
1995	48,650.2	18,689.9	1,862.1	1,576.8	4,029.0	6,801.9
1996 p	48,572.9	18,643.4	1,861.3	1,586.3	4,033.9	6,956.9
1997 p	48,614.6	18,698.9	1,872.2	1,588.4	4,006.4	7,108.9
% change from 80 to 95	208.0	261.9	185.2	160.8	166.8	251.7
Ave. Ann. Compound Rate of Change (80 to 95)	7.8	9.0	7.2	6.6	6.8	8.7
	Provincial Government Health Expenditures as a Percentage of GDP					
1980	5.1	4.5	5.8	4.9	3.5	5.1
1981	5.2	4.7	6.0	4.8	3.6	5.3
1982	5.9	5.2	6.7	5.7	4.4	6.1
1983	6.0	5.3	7.0	6.1	4.9	6.2
1984	5.9	5.2	6.6	6.0	4.7	6.2
1985	5.9	5.3	6.7	6.2	4.7	6.1
1986	6.0	5.3	6.8	7.0	5.9	6.2
1987	6.0	5.4	6.9	7.1	5.7	5.9
1988	5.9	5.3	6.9	7.0	5.6	5.8
1989	6.0	5.4	7.0	7.2	5.9	5.9
1990	6.3	5.8	7.4	7.4	5.7	6.3
1991	6.8	6.4	7.6	7.7	6.1	6.8
1992	7.0	6.6	7.7	7.6	6.3	7.0
1993	6.8	6.4	7.6	6.9	5.8	7.1
1994	6.5	6.2	7.3	6.6	5.2	6.8
1995	6.3	6.0	7.1	6.4	4.7	6.7
1996 p	6.1	5.8	6.8	6.0	4.5	6.7
1997 p	5.8	5.5	6.5	5.8	4.2	6.5
% change from 80 to 95	23.0	32.5	21.9	31.7	35.6	31.9
Ave. Ann. Compound Rate of Change (80 to 95)	1.4	1.9	1.4	1.8	2.0	1.8
	Provincial Government Health Expd. as a Percentage of Provincial Government Total Program Expenditures					
1980	31.2	34.4	35.5	29.4	22.8	35.5
1981	32.7	37.2	37.0	29.8	27.6	35.8
1982	33.1	37.7	35.5	32.0	28.3	34.9
1983	31.5	37.4	34.2	31.1	23.4	30.9
1984	31.4	38.1	32.3	31.7	23.9	30.7
1985	32.5	39.4	33.6	31.1	25.8	31.5
1986	32.1	37.9	32.9	30.2	25.5	33.1
1987	33.1	40.2	32.6	32.6	24.1	34.0
1988	34.3	40.1	34.9	34.1	27.5	35.8
1989	34.5	40.0	34.1	31.7	29.8	36.9
1990	34.5	40.2	34.6	29.1	29.7	36.7
1991	34.5	39.6	34.6	30.4	30.5	35.2
1992	33.0	36.7	32.8	26.0	31.7	34.0
1993	32.2	35.7	32.7	29.7	29.6	34.8
1994	32.8	36.6	32.8	30.6	30.4	34.1
1995	32.6	37.0	34.9	34.6	28.4	32.6
1996 p	32.2	36.5	34.1	33.1	29.7	32.2
1997 p	33.1	38.4	35.1	34.1	29.8	32.1
% change from 80 to 95	4.5	7.6	(1.9)	17.7	24.6	(8.3)
Ave. Ann. Compound Rate of Change (80 to 95)	0.3	0.5	(0.1)	1.1	1.5	(0.6)

p: preliminary

Data Sources: Canadian Institution for Health Information (CIHI), "National Health Expenditure Trends - 1975 to 1997", December 1997 and unpublished Statistics Canada data.

Note: For definitions, notes and original data sources used by the CIHI, see Appendix I.

March 1998
Health Economics

APPENDIX II, TABLE 2

PER CAPITA PROVINCIAL GOVERNMENT HEALTH EXPENDITURES, GROSS DOMESTIC PRODUCT, AND PROVINCIAL GOVERNMENT TOTAL PROGRAM EXPENDITURES FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	Per Capita Provincial Government Health Expenditures (In Current $)					
1980	642	589	630	623	686	702
1981	749	687	754	726	812	838
1982	872	794	872	868	1,021	943
1983	961	884	961	961	1,154	1,005
1984	1,019	959	1,026	1,004	1,185	1,039
1985	1,085	1,044	1,090	1,070	1,259	1,071
1986	1,164	1,160	1,160	1,184	1,360	1,141
1987	1,236	1,260	1,240	1,220	1,354	1,196
1988	1,318	1,347	1,324	1,247	1,424	1,268
1989	1,423	1,463	1,427	1,369	1,538	1,371
1990	1,515	1,549	1,541	1,517	1,596	1,505
1991	1,631	1,702	1,577	1,585	1,660	1,635
1992	1,682	1,753	1,620	1,550	1,729	1,736
1993	1,672	1,716	1,609	1,483	1,682	1,806
1994	1,661	1,698	1,615	1,517	1,574	1,814
1995	1,643	1,684	1,638	1,551	1,464	1,808
1996 p	1,621	1,657	1,628	1,551	1,446	1,805
1997 p	1,604	1,638	1,628	1,547	1,419	1,803
% change from 80 to 95	155.8	186.0	160.1	148.8	113.4	157.6
Ave. Ann. Compound Rate of Change (80 to 95)	6.5	7.3	6.6	6.3	5.2	6.5
	Per Capita Gross Domestic Product (In Current $)					
1980	1,260	1,311	1,079	1,279	1,960	1,388
1981	1,430	1,464	1,247	1,509	2,256	1,578
1982	1,486	1,516	1,300	1,517	2,334	1,551
1983	1,594	1,676	1,379	1,585	2,372	1,612
1984	1,730	1,851	1,544	1,664	2,520	1,674
1985	1,843	1,989	1,639	1,724	2,682	1,765
1986	1,930	2,170	1,697	1,681	2,322	1,838
1987	2,078	2,342	1,797	1,724	2,391	2,026
1988	2,253	2,561	1,922	1,792	2,530	2,192
1989	2,377	2,720	2,029	1,909	2,624	2,331
1990	2,409	2,683	2,095	2,053	2,795	2,387
1991	2,406	2,659	2,068	2,056	2,741	2,410
1992	2,418	2,656	2,097	2,041	2,731	2,494
1993	2,463	2,668	2,115	2,152	2,895	2,552
1994	2,554	2,751	2,211	2,289	3,048	2,685
1995	2,621	2,830	2,303	2,415	3,084	2,709
1996 p	2,663	2,871	2,391	2,586	3,228	2,688
1997 p	2,759	2,983	2,489	2,647	3,393	2,773
% change from 80 to 95	108.0	115.8	113.4	88.8	57.3	95.2
Ave. Ann. Compound Rate of Change (80 to 95)	5.0	5.3	5.2	4.3	3.1	4.6
	Per Capita Provincial Government Total Program Expenditures (In Current $)					
1980	2,060	1,711	1,773	2,122	3,004	1,977
1981	2,289	1,848	2,038	2,435	2,939	2,338
1982	2,637	2,103	2,457	2,710	3,609	2,705
1983	3,047	2,361	2,807	3,089	4,931	3,255
1984	3,240	2,519	3,175	3,169	4,951	3,391
1985	3,336	2,651	3,241	3,446	4,875	3,404
1986	3,629	3,060	3,525	3,922	5,327	3,448
1987	3,735	3,132	3,807	3,745	5,623	3,523
1988	3,843	3,355	3,793	3,659	5,174	3,544
1989	4,125	3,660	4,186	4,319	5,160	3,712
1990	4,390	3,850	4,459	5,206	5,368	4,105
1991	4,727	4,301	4,555	5,211	5,444	4,643
1992	5,098	4,781	4,937	5,961	5,447	5,105
1993	5,190	4,809	4,916	4,994	5,693	5,184
1994	5,067	4,641	4,918	4,963	5,170	5,317
1995	5,040	4,548	4,700	4,486	5,147	5,550
1996 p	5,030	4,536	4,778	4,683	4,877	5,606
1997 p	4,847	4,264	4,642	4,538	4,755	5,624
% change from 80 to 95	144.7	165.9	165.1	111.4	71.3	180.7
Ave. Ann. Compound Rate of Change (80 to 95)	6.1	6.7	6.7	5.1	3.7	7.1

p: preliminary

Data Source: Canadian Institution for Health Information, "National Health Expenditure Trends - 1975 to 1997" , December 1997 and unpublished Statistics Canada data.

Note: For definitions, notes and original data sources used by the CIHI, see Appendix I.

APPENDIX II, TABLE 3A

PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN CURRENT DOLLARS) BY AGE GROUP AND GENDER FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (0-14)			
1980	242	210	215	272	271	253
1981	274	241	250	245	314	306
1982	315	273	290	377	404	337
1983	351	313	316	416	443	362
1984	367	332	315	423	447	361
1985	387	366	316	446	461	356
1986	423	414	369	501	497	387
1987	440	446	381	477	469	388
1988	456	459	398	461	474	409
1989	497	499	430	495	579	436
1990	514	517	453	528	578	469
1991	556	554	470	541	624	480
1992	545	548	462	505	654	497
1993	534	530	453	489	630	503
1994	519	512	448	496	588	497
% change from 80 to 94	114.5	143.8	109.0	82.8	117.1	96.3
Ave. Ann. Compound Rate of Change (80 to 94)	5.6	6.6	5.4	4.4	5.7	4.9
			Males (0-14)			
1980	258	228	228	275	290	272
1981	294	261	269	261	339	324
1982	338	294	309	404	432	356
1983	378	341	343	437	479	381
1984	394	359	338	454	481	385
1985	416	394	344	483	504	385
1986	451	437	401	546	540	409
1987	473	481	409	520	507	417
1988	486	491	431	494	507	434
1989	533	537	464	538	619	471
1990	549	551	488	575	624	506
1991	594	592	492	582	675	514
1992	585	591	471	555	708	536
1993	574	573	462	535	682	546
1994	559	555	458	545	638	538
% change from 80 to 94	116.6	144.0	101.1	97.9	120.2	97.7
Ave. Ann. Compound Rate of Change (80 to 94)	5.7	6.6	5.1	5.0	5.8	5.0
			Females (0-14)			
1980	225	191	201	268	250	233
1981	254	220	231	229	289	287
1982	291	251	270	349	375	318
1983	323	284	288	395	405	343
1984	339	304	291	392	412	336
1985	357	336	287	408	415	347
1986	394	389	336	454	457	363
1987	406	409	350	432	429	358
1988	426	426	364	428	440	383
1989	459	460	394	451	536	399
1990	477	481	417	478	530	429
1991	516	515	447	499	570	445
1992	504	504	453	454	596	455
1993	492	485	443	441	575	458
1994	477	467	439	446	535	454
% change from 80 to 94	112.1	143.7	118.2	66.6	113.5	94.9
Ave. Ann. Compound Rate of Change (80 to 94)	5.5	6.6	5.7	3.7	5.6	4.9

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .

Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX II, TABLE 3B

PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN CURRENT DOLLARS) BY AGE GROUP AND GENDER FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (15-44)			
1980	382	365	348	388	422	415
1981	442	421	412	417	498	512
1982	511	480	478	548	632	562
1983	573	528	523	596	719	599
1984	598	567	550	623	721	604
1985	626	615	573	663	744	615
1986	669	682	632	744	806	650
1987	696	729	662	759	771	664
1988	735	769	705	735	799	700
1989	803	838	776	800	990	757
1990	862	893	828	889	1,034	834
1991	916	966	859	922	1,068	888
1992	935	991	871	887	1,097	933
1993	928	968	869	836	1,067	964
1994	924	961	883	849	994	976
% change from 80 to 94	141.8	163.1	153.7	119.1	135.2	135.0
Ave. Ann. Compound Rate of Change (80 to 94)	6.5	7.2	6.9	5.8	6.3	6.3
			Males (15-44)			
1980	287	276	258	280	318	316
1981	336	318	310	326	373	399
1982	388	361	361	409	471	426
1983	432	394	391	438	532	453
1984	449	422	413	459	531	458
1985	473	458	427	491	554	464
1986	503	508	489	557	596	492
1987	524	541	502	580	567	504
1988	558	582	548	565	591	534
1989	604	626	591	609	713	582
1990	658	676	645	677	759	642
1991	703	729	664	703	782	694
1992	720	760	664	674	794	742
1993	717	746	662	637	773	772
1994	717	747	676	650	718	777
% change from 80 to 94	149.6	170.2	162.0	132.3	126.0	145.5
Ave. Ann. Compound Rate of Change (80 to 94)	6.8	7.4	7.1	6.2	6.0	6.6
			Females (15-44)			
1980	480	455	440	500	536	518
1981	551	526	516	511	634	630
1982	637	600	597	694	808	703
1983	718	664	659	761	921	750
1984	751	715	693	794	924	754
1985	783	774	725	844	946	770
1986	839	859	781	939	1,028	812
1987	873	920	829	947	985	828
1988	918	960	868	913	1,017	871
1989	1,007	1,054	968	999	1,279	936
1990	1,070	1,113	1,018	1,110	1,320	1,030
1991	1,133	1,206	1,062	1,149	1,366	1,087
1992	1,156	1,226	1,086	1,107	1,413	1,126
1993	1,144	1,194	1,083	1,042	1,371	1,160
1994	1,136	1,178	1,098	1,055	1,280	1,179
% change from 80 to 94	136.6	158.7	149.6	111.0	138.8	127.3
Ave. Ann. Compound Rate of Change (80 to 94)	6.4	7.0	6.8	5.5	6.4	6.1

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .

Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX II, TABLE 3C

PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN CURRENT DOLLARS) BY AGE GROUP AND GENDER FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (45-64)			
1980	677	627	618	631	706	623
1981	784	721	705	801	850	751
1982	901	820	846	853	1,075	837
1983	993	906	899	920	1,212	879
1984	1,035	967	980	965	1,235	893
1985	1,091	1,039	1,015	1,034	1,259	924
1986	1,158	1,152	1,056	1,125	1,349	980
1987	1,209	1,231	1,131	1,156	1,296	981
1988	1,273	1,306	1,200	1,124	1,354	1,074
1989	1,357	1,405	1,226	1,256	1,566	1,087
1990	1,429	1,472	1,332	1,366	1,603	1,199
1991	1,512	1,591	1,353	1,399	1,658	1,288
1992	1,543	1,626	1,359	1,384	1,711	1,301
1993	1,502	1,561	1,319	1,274	1,637	1,326
1994	1,461	1,508	1,300	1,275	1,502	1,313
% change from 80 to 94	115.7	140.4	110.4	102.0	112.7	110.8
Ave. Ann. Compound Rate of Change (80 to 94)	5.7	6.5	5.5	5.2	5.5	5.5
			Males (45-64)			
1980	680	628	611	602	699	623
1981	787	728	698	800	814	740
1982	910	826	894	839	1,057	833
1983	1,002	909	893	911	1,173	873
1984	1,036	970	993	955	1,180	881
1985	1,086	1,039	1,016	1,022	1,233	884
1986	1,159	1,155	1,079	1,104	1,299	959
1987	1,198	1,209	1,114	1,127	1,233	966
1988	1,261	1,293	1,181	1,119	1,273	1,060
1989	1,347	1,387	1,221	1,220	1,492	1,050
1990	1,399	1,425	1,295	1,323	1,527	1,125
1991	1,484	1,558	1,334	1,376	1,564	1,240
1992	1,497	1,553	1,313	1,310	1,614	1,254
1993	1,455	1,493	1,274	1,216	1,538	1,274
1994	1,413	1,443	1,251	1,221	1,405	1,257
% change from 80 to 94	107.9	129.6	104.8	102.9	100.9	101.8
Ave. Ann. Compound Rate of Change (80 to 94)	5.4	6.1	5.3	5.2	5.1	5.1
			Females (45-64)			
1980	675	626	624	661	713	623
1981	780	714	713	801	887	761
1982	892	813	800	866	1,094	841
1983	985	903	904	930	1,253	885
1984	1,035	965	967	976	1,292	906
1985	1,096	1,039	1,013	1,046	1,285	964
1986	1,157	1,149	1,035	1,146	1,400	1,001
1987	1,220	1,251	1,146	1,184	1,361	997
1988	1,286	1,319	1,219	1,130	1,438	1,088
1989	1,367	1,422	1,230	1,292	1,643	1,126
1990	1,458	1,520	1,369	1,409	1,683	1,275
1991	1,540	1,624	1,372	1,421	1,757	1,338
1992	1,589	1,697	1,404	1,458	1,813	1,351
1993	1,548	1,629	1,365	1,332	1,739	1,381
1994	1,509	1,572	1,348	1,329	1,602	1,371
% change from 80 to 94	123.6	151.0	116.0	101.2	124.7	120.1
Ave. Ann. Compound Rate of Change (80 to 94)	5.9	6.8	5.7	5.1	6.0	5.8

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .

Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX II, TABLE 3D

PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN CURRENT DOLLARS) BY AGE GROUP AND GENDER FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (65+)			
1980	2,898	2,489	2,616	2,249	3,928	3,091
1981	3,373	2,895	3,156	2,753	4,719	3,558
1982	3,914	3,372	3,572	3,075	5,849	4,044
1983	4,198	3,743	3,986	3,479	6,527	4,254
1984	4,476	4,089	4,271	3,638	6,677	4,446
1985	4,751	4,407	4,600	3,848	7,172	4,494
1986	5,004	4,805	4,736	4,186	7,580	4,681
1987	5,336	5,242	5,071	4,355	7,652	4,971
1988	5,682	5,636	5,382	4,642	7,989	5,171
1989	6,031	6,092	5,756	5,010	7,345	5,666
1990	6,360	6,403	6,191	5,481	7,569	6,188
1991	6,819	7,038	6,238	5,701	7,732	6,821
1992	7,051	7,224	6,463	5,573	7,993	7,370
1993	6,983	7,042	6,415	5,370	7,689	7,748
1994	6,896	6,942	6,401	5,507	7,112	7,759
% change from 80 to 94	138.0	178.9	144.7	144.8	81.1	151.0
Ave. Ann. Compound Rate of Change (80 to 94)	6.4	7.6		6.6	4.3	6.8
			Males (65+)			
1980	2,664	2,255	2,483	2,067	3,694	2,644
1981	3,135	2,748	3,176	2,361	4,348	3,034
1982	3,650	3,155	3,566	2,856	5,415	3,495
1983	3,957	3,568	3,735	3,215	6,039	3,593
1984	4,239	3,873	4,055	3,375	6,255	3,900
1985	4,493	4,199	4,315	3,598	6,613	3,862
1986	4,748	4,568	4,482	3,928	7,085	4,108
1987	5,081	4,962	4,800	4,055	7,248	4,281
1988	5,396	5,306	5,044	4,319	7,547	4,584
1989	5,726	5,743	5,425	4,770	7,230	4,972
1990	6,035	6,022	5,715	5,078	7,555	5,351
1991	6,415	6,570	5,863	5,387	7,544	5,876
1992	6,613	6,708	6,269	5,127	7,855	6,238
1993	6,549	6,563	6,212	4,933	7,523	6,547
1994	6,462	6,478	6,189	5,058	6,924	6,555
% change from 80 to 94	142.6	187.3	149.2	144.7	87.5	147.9
Ave. Ann. Compound Rate of Change (80 to 94)	6.5	7.8	6.7	6.6	4.6	6.7
			Females (65+)			
1980	3,074	2,657	2,721	2,409	4,125	3,450
1981	3,551	3,000	3,141	3,094	5,026	3,973
1982	4,111	3,527	3,576	3,262	6,203	4,474
1983	4,375	3,867	4,177	3,702	6,920	4,766
1984	4,649	4,242	4,435	3,857	7,014	4,864
1985	4,938	4,554	4,814	4,052	7,612	4,974
1986	5,189	4,971	4,923	4,394	7,966	5,114
1987	5,519	5,438	5,269	4,597	7,965	5,491
1988	5,888	5,869	5,628	4,900	8,331	5,614
1989	6,250	6,339	5,996	5,201	7,434	6,191
1990	6,594	6,674	6,536	5,799	7,580	6,823
1991	7,111	7,372	6,511	5,949	7,877	7,541
1992	7,368	7,595	6,604	5,922	8,100	8,234
1993	7,298	7,389	6,562	5,711	7,817	8,671
1994	7,212	7,279	6,555	5,857	7,259	8,688
% change from 80 to 94	134.6	174.0	140.9	143.1	76.0	151.8
Ave. Ann. Compound Rate of Change (80 to 94)	6.3	7.5	6.5	6.6	4.1	6.8

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .

Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX II, TABLE 3E

PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN CURRENT DOLLARS) BY AGE GROUP AND GENDER FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (Total)			
1980	642	589	630	623	686	702
1981	749	687	754	726	812	838
1982	872	794	872	868	1,021	943
1983	961	884	961	961	1,154	1,005
1984	1,019	959	1,026	1,004	1,185	1,039
1985	1,085	1,044	1,090	1,070	1,259	1,071
1986	1,164	1,160	1,160	1,184	1,360	1,141
1987	1,236	1,260	1,240	1,220	1,354	1,196
1988	1,318	1,347	1,324	1,247	1,424	1,268
1989	1,423	1,463	1,427	1,369	1,538	1,371
1990	1,515	1,549	1,541	1,517	1,596	1,505
1991	1,631	1,702	1,577	1,585	1,660	1,635
1992	1,682	1,753	1,620	1,550	1,729	1,736
1993	1,672	1,716	1,609	1,483	1,682	1,806
1994	1,661	1,698	1,615	1,517	1,574	1,814
% change from 80 to 94	158.6	188.4	156.4	143.3	129.4	158.4
Ave. Ann. Compound Rate of Change (80 to 94)	7.0	7.9	7.0	6.6	6.1	7.0
			Males (Total)			
1980	546	496	545	534	591	583
1981	640	589	672	623	686	695
1982	745	674	784	758	863	779
1983	822	754	821	830	971	819
1984	869	814	883	868	998	858
1985	924	887	926	928	1,060	868
1986	990	983	999	1,028	1,143	938
1987	1,051	1,061	1,052	1,056	1,139	975
1988	1,120	1,137	1,122	1,079	1,194	1,051
1989	1,208	1,232	1,208	1,192	1,308	1,127
1990	1,287	1,302	1,291	1,300	1,373	1,223
1991	1,384	1,429	1,332	1,373	1,414	1,336
1992	1,423	1,469	1,377	1,316	1,475	1,412
1993	1,416	1,444	1,366	1,259	1,434	1,470
1994	1,408	1,435	1,369	1,290	1,338	1,474
% change from 80 to 94	157.8	189.1	151.4	141.6	126.3	153.0
Ave. Ann. Compound Rate of Change (80 to 94)	7.0	7.9	6.8	6.5	6.0	6.9
			Females (Total)			
1980	738	680	713	714	786	821
1981	857	783	834	830	946	982
1982	997	911	959	979	1,186	1,108
1983	1,098	1,011	1,097	1,093	1,345	1,191
1984	1,167	1,101	1,166	1,141	1,380	1,220
1985	1,244	1,199	1,252	1,214	1,463	1,273
1986	1,335	1,334	1,319	1,342	1,582	1,342
1987	1,419	1,456	1,425	1,385	1,573	1,416
1988	1,514	1,552	1,522	1,414	1,660	1,484
1989	1,634	1,689	1,643	1,545	1,773	1,613
1990	1,739	1,791	1,787	1,733	1,823	1,783
1991	1,873	1,968	1,819	1,796	1,910	1,932
1992	1,937	2,031	1,859	1,782	1,986	2,056
1993	1,923	1,982	1,848	1,705	1,933	2,139
1994	1,909	1,955	1,856	1,741	1,812	2,150
% change from 80 to 94	158.7	187.7	160.2	143.8	130.7	161.7
Ave. Ann. Compound Rate of Change (80 to 94)	7.0	7.8	7.1	6.6	6.2	7.1

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .

Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX III

PROVINCIAL HEALTH EXPENDITURES DATA

FOR THE SELECTED PROVINCES AND CANADA

(In1994 Dollars)

APPENDIX III, TABLE 1

REAL PROVINCIAL GOVERNMENT HEALTH EXPENDITURES (IN 1994 DOLLARS)
AS A PERCENTAGE OF REAL GDP AND. REAL PROVINCIAL GOVT. TOTAL PROGRAM EXPENDITURES (IN 1994 $S)
FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	Real Provincial Health Expenditures (In 1994 Dollars) ($ 000,000)					
1980	32,254.4	11,604.7	1,327.3	1,223.0	2,921.7	3,848.0
1981	33,512.3	11,875.2	1,352.2	1,235.7	3,193.2	4,076.1
1982	34,751.8	12,082.0	1,406.5	1,332.8	3,497.4	4,065.9
1983	36,448.7	12,539.6	1,471.2	1,406.5	3,712.4	4,207.5
1984	37,246.1	13,036.5	1,529.4	1,402.8	3,775.1	4,352.8
1985	38,337.0	13,434.3	1,584.6	1,485.4	3,908.5	4,466.1
1986	40,031.3	14,306.0	1,631.5	1,603.9	4,126.2	4,703.5
1987	40,889.5	14,797.7	1,668.6	1,630.0	4,042.5	4,685.4
1988	42,669.4	15,715.3	1,733.2	1,577.3	4,179.9	4,945.6
1989	44,748.8	16,817.0	1,768.3	1,629.1	4,383.7	5,150.7
1990	46,526.5	17,755.9	1,827.1	1,687.8	4,527.7	5,555.3
1991	48,559.3	19,051.6	1,791.1	1,666.3	4,510.9	5,847.7
1992	49,251.9	19,410.4	1,812.0	1,580.5	4,654.8	6,083.9
1993	48,575.1	18,731.3	1,820.0	1,495.2	4,536.8	6,442.2
1994	48,583.5	18,576.4	1,823.6	1,535.2	4,273.1	6,658.3
1995	48,120.9	18,422.6	1,829.2	1,550.4	4,005.0	6,774.8
% change from 80 to 95	49.2	58.8	37.8	26.8	37.1	76.1
Ave. Ann. Compound Rate of Change (80 to 95)	2.7	3.1	2.2	1.6	2.1	3.8
	Real Provincial Health Expenditures as a % of Real GDP (In 1994 Dollars)					
1980	n/a	n/a	n/a	n/a	n/a	n/a
1981	6.1	5.6	6.8	6.9	5.2	5.5
1982	6.5	5.9	7.2	7.6	5.9	6.0
1983	6.6	5.7	7.4	7.7	6.5	6.1
1984	6.4	5.5	6.8	7.5	6.2	6.3
1985	6.2	5.4	6.8	7.8	5.9	6.0
1986	6.3	5.5	6.9	7.8	6.3	6.2
1987	6.2	5.4	7.0	7.9	6.1	5.8
1988	6.2	5.5	7.3	7.9	5.8	5.8
1989	6.3	5.7	7.3	7.9	6.1	5.9
1990	6.6	6.1	7.3	7.5	6.1	6.2
1991	7.0	6.8	7.5	7.3	6.1	6.5
1992	7.0	6.8	7.5	7.3	6.3	6.6
1993	6.8	6.5	7.5	6.7	5.8	6.8
1994	6.5	6.2	7.3	6.6	5.2	6.8
1995	6.3	5.9	7.2	6.6	4.8	6.8
% change from 81 to 95	3.9	5.6	5.2	(4.3)	(9.2)	23.5
Ave. Ann. Compound Rate of Change (81 to 95)	0.2	0.4	0.4	(0.3)	(0.6)	1.5
	Real Provincial Health Expenditures as a % of Real Provincial Government Total Program Expenditures (In 1994 Dollars)					
1980	33.0	38.0	38.1	31.0	23.9	35.4
1981	34.4	40.7	37.9	30.3	28.8	35.9
1982	34.2	40.0	36.4	33.3	28.0	34.4
1983	32.6	39.0	35.6	32.8	23.4	30.6
1984	32.3	39.0	33.6	33.1	24.2	30.6
1985	33.2	39.6	34.9	32.9	25.8	31.4
1986	32.6	37.6	33.8	32.2	25.6	33.1
1987	33.2	38.9	33.0	34.9	24.3	33.1
1988	34.5	39.4	35.9	36.0	28.0	34.9
1989	34.5	39.3	34.4	33.0	29.9	35.7
1990	35.0	40.8	34.8	30.3	30.5	35.7
1991	35.0	40.7	34.4	30.7	30.9	34.3
1992	33.4	37.7	32.6	25.9	32.0	33.1
1993	32.1	36.0	32.8	29.2	29.7	34.1
1994	32.8	36.6	32.8	30.6	30.4	34.1
1995	32.5	36.7	34.7	34.8	28.2	33.2
% change from 80 to 95	(1.4)	(3.4)	(9.1)	12.3	18.3	(6.3)
Ave. Ann. Compound Rate of Change (80 to 95)	(0.1)	(0.2)	(0.6)	0.8	1.1	(0.4)

Data Sources: Canadian Institution of Health Information (CIHI), "National Health Expenditure Trends - 1975 to 1997", December 1997 and unpublished Statistics Canada data

Note: For definitions, notes and original data sources used by the CIHI, see Appendix I.

APPENDIX III, TABLE 2

REAL PER CAPITA PROVINCIAL GOVERNMENT HEALTH EXPENDITURES, GROSS DOMESTIC PRODUCT, AND PROVINCIAL GOVERNMENT TOTAL PROGRAM EXPENDITURES FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	Real Per Capita Provincial Government Health Expenditures (In 1994 Dollars)					
1980	1,312	1,323	1,280	1,261	1,327	1,396
1981	1,346	1,344	1,302	1,263	1,386	1,437
1982	1,379	1,350	1,341	1,346	1,471	1,409
1983	1,432	1,382	1,384	1,400	1,547	1,441
1984	1,449	1,416	1,424	1,377	1,574	1,470
1985	1,478	1,439	1,461	1,444	1,621	1,494
1986	1,528	1,510	1,491	1,553	1,692	1,557
1987	1,540	1,528	1,516	1,573	1,654	1,529
1988	1,587	1,590	1,569	1,529	1,697	1,581
1989	1,634	1,657	1,598	1,593	1,750	1,605
1990	1,674	1,717	1,648	1,670	1,771	1,683
1991	1,727	1,819	1,610	1,656	1,734	1,730
1992	1,726	1,823	1,621	1,568	1,759	1,750
1993	1,678	1,732	1,619	1,479	1,689	1,802
1994	1,661	1,698	1,615	1,517	1,574	1,814
1995	1,625	1,660	1,609	1,525	1,455	1,800
% change from 80 to 95	23.9	25.5	25.7	20.9	9.6	28.9
Ave. Ann. Compound Rate of Change (80 to 95)	1.4	1.5	1.5	1.3	0.6	1.7
	Real Per Capita Gross Domestic Product (In 1994 Dollars)					
1980	n/a	n/a	n/a	n/a	n/a	n/a
1981	2,216	2,396	1,911	1,829	2,641	2601.2
1982	2,120	2,286	1,864	1,765	2,492	2352.4
1983	2,165	2,412	1,879	1,826	2,397	2367.7
1984	2,279	2,581	2,081	1,841	2,525	2346.3
1985	2,365	2,654	2,140	1,860	2,739	2477.2
1986	2,420	2,745	2,150	1,999	2,677	2494.7
1987	2,488	2,805	2,177	1,992	2,700	2642.9
1988	2,578	2,913	2,151	1,944	2,906	2726.5
1989	2,594	2,928	2,199	2,024	2,884	2743.5
1990	2,549	2,805	2,259	2,236	2,895	2718.0
1991	2,475	2,683	2,143	2,276	2,847	2663.1
1992	2,457	2,665	2,158	2,160	2,806	2649.8
1993	2,476	2,656	2,165	2,219	2,926	2639.7
1994	2,554	2,751	2,211	2,289	3,048	2684.8
1995	2,575	2,805	2,244	2,309	3,053	2638.0
% change from 81 to 95	16.2	17.0	17.5	26.2	15.6	1.4
Ave. Ann. Compound Rate of Change (81 to 95)	1.1	1.1	1.6	1.6	1.0	0.1
	Real Per Capita Provincial Government Total Program Expenditures (In 1994 Dollars)					
1980	3,979	3,485	3,358	4,072	5,557	3,942
1981	3,908	3,302	3,434	4,170	4,813	3,998
1982	4,033	3,373	3,688	4,044	5,246	4,096
1983	4,394	3,548	3,887	4,271	6,619	4,706
1984	4,492	3,632	4,233	4,161	6,512	4,800
1985	4,448	3,639	4,187	4,394	6,280	4,755
1986	4,689	4,015	4,413	4,816	6,622	4,710
1987	4,644	3,932	4,596	4,505	6,819	4,623
1988	4,602	4,038	4,369	4,251	6,068	4,324
1989	4,737	4,216	4,642	4,831	5,857	4,500
1990	4,778	4,206	4,731	5,516	5,812	4,716
1991	4,930	4,471	4,679	5,386	5,620	5,098
1992	5,174	4,833	4,969	6,049	5,491	5,287
1993	5,230	4,817	4,943	5,064	5,688	5,292
1994	5,067	4,641	4,918	4,963	5,170	5,317
1995	4,998	4,527	4,641	4,383	5,152	5,427
% change from 80 to 95	25.6	29.9	38.2	7.6	(7.3)	37.7
Ave. Ann. Compound Rate of Change (80 to 95)	1.5	1.8	2.2	0.5	(0.5)	2.2

f: forecast

Data Sources: Canadian Institutes for Health Information, "National Health Expenditure Trends - 1975 to 1997" , December 1997 and unpublished Statistics Canada data.

Note: For definitions, notes and original data sources used by the CIHI, see Appendix I.

APPENDIX III, TABLE 3A

REAL PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN 1994 DOLLARS) BY AGE GROUP AND GENDER FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (0-14)			
1980	494	472	436	549	524	503
1981	493	472	432	427	537	525
1982	498	464	446	585	583	504
1983	524	490	455	606	593	520
1984	522	490	437	580	594	511
1985	527	504	424	602	593	511
1986	556	538	474	657	618	528
1987	548	540	465	615	573	496
1988	549	542	472	566	565	510
1989	571	565	482	576	658	510
1990	568	573	485	581	642	524
1991	588	593	480	566	652	508
1992	559	570	462	511	665	501
1993	536	535	455	488	632	502
1994	519	512	448	496	588	497
% change from 80 to 94	5.1	8.5	2.8	(9.6)	12.2	(1.3)
Ave. Ann. Compound Rate of Change (80 to 94)	0.4	0.6	0.2	-0.7	0.8	(0.1)
			Males (0-14)			
1980	527	511	463	557	561	541
1981	528	511	465	455	578	555
1982	535	499	475	626	623	531
1983	563	533	494	636	642	546
1984	560	530	469	622	639	545
1985	566	543	462	652	649	537
1986	592	569	515	716	672	558
1987	589	583	500	671	619	533
1988	585	579	511	606	604	541
1989	613	608	520	626	704	552
1990	607	611	522	633	693	566
1991	629	633	502	608	705	544
1992	600	615	471	561	721	540
1993	576	578	465	533	685	545
1994	559	555	458	545	638	538
% change from 80 to 94	6.1	8.6	(1.1)	(2.2)	13.8	(0.7)
Ave. Ann. Compound Rate of Change (80 to 94)	0.4	0.6	(0.1)	(0.2)	0.9	0.0
			Females (0-14)			
1980	460	430	409	542	484	464
1981	455	431	398	398	493	492
1982	460	426	416	541	541	475
1983	482	445	414	575	542	492
1984	483	449	403	537	547	476
1985	486	463	385	550	535	483
1986	517	506	432	596	563	496
1987	506	496	428	557	524	458
1988	512	503	432	525	525	477
1989	527	521	442	524	610	467
1990	527	533	446	527	588	480
1991	546	550	456	521	595	471
1992	517	524	453	459	606	459
1993	494	490	445	440	577	457
1994	477	467	439	446	535	454
% change from 80 to 94	3.9	8.5	7.3	(17.7)	10.4	(2.1)
Ave. Ann. Compound Rate of Change (80 to 94)	0.3	0.6	0.5	(1.4)	0.7	(0.2)

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .

Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX III, TABLE 3B

REAL PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN 1994 DOLLARS)
BY AGE GROUP AND GENDER
FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (15-44)			
1980	781	821	708	784	817	827
1981	794	824	712	726	849	878
1982	809	816	734	850	911	839
1983	854	825	754	868	964	858
1984	850	837	764	854	958	854
1985	852	847	768	895	958	857
1986	878	887	812	975	1,008	887
1987	867	884	810	979	942	849
1988	885	908	836	901	952	873
1989	923	949	869	930	1,127	886
1990	952	989	886	979	1,147	933
1991	970	1,033	877	963	1,115	940
1992	959	1,031	872	897	1,116	940
1993	932	977	874	834	1,071	962
1994	924	961	883	849	994	976
% change from 80 to 94	18.4	17.1	24.8	8.3	21.6	18.1
Ave. Ann. Compound Rate of Change (80 to 94)	1.2	1.1	1.6	0.6	1.4	1.2
			Males (15-44)			
1980	586	621	525	566	615	630
1981	604	622	536	568	636	684
1982	615	614	555	634	678	636
1983	645	616	563	638	712	649
1984	638	623	572	630	705	648
1985	644	631	572	663	714	647
1986	661	661	628	731	742	672
1987	652	656	614	748	693	645
1988	671	687	650	693	704	666
1989	694	709	663	708	812	681
1990	728	749	690	745	842	718
1991	745	779	678	734	817	734
1992	738	790	665	682	807	748
1993	720	753	666	636	776	770
1994	717	747	676	650	718	777
% change from 80 to 94	22.3	20.3	28.8	14.8	16.8	23.4
Ave. Ann. Compound Rate of Change (80 to 94)	1.5	1.3	1.8	1.0	1.1	1.5
			Females (15-44)			
1980	981	1,023	894	1,011	1,037	1,032
1981	990	1,029	891	890	1,082	1,080
1982	1,008	1,020	917	1,076	1,165	1,049
1983	1,070	1,038	949	1,108	1,235	1,075
1984	1,068	1,055	961	1,089	1,227	1,067
1985	1,066	1,067	972	1,138	1,218	1,073
1986	1,102	1,118	1,004	1,231	1,279	1,109
1987	1,088	1,116	1,013	1,221	1,203	1,058
1988	1,104	1,134	1,029	1,119	1,212	1,085
1989	1,157	1,194	1,084	1,162	1,456	1,096
1990	1,182	1,233	1,090	1,222	1,465	1,152
1991	1,200	1,289	1,084	1,200	1,426	1,150
1992	1,186	1,275	1,087	1,120	1,437	1,135
1993	1,149	1,205	1,090	1,040	1,377	1,157
1994	1,136	1,178	1,098	1,055	1,280	1,179
% change from 80 to 94	15.9	15.1	22.8	4.3	23.4	14.2
Ave. Ann. Compound Rate of Change (80 to 94)	1.1	1.0	1.5	0.3	1.5	1.0

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .
Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX III, TABLE 3C

REAL PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN 994 DOLLARS) BY AGE GROUP AND GENDER FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (45-64)			
1980	1,383	1,409	1,256	1,277	1,366	1,240
1981	1,408	1,410	1,218	1,394	1,451	1,287
1982	1,425	1,394	1,300	1,323	1,550	1,250
1983	1,480	1,417	1,294	1,341	1,625	1,261
1984	1,473	1,429	1,359	1,324	1,640	1,264
1985	1,485	1,432	1,359	1,394	1,621	1,288
1986	1,521	1,499	1,357	1,475	1,678	1,338
1987	1,506	1,492	1,382	1,490	1,583	1,254
1988	1,532	1,542	1,422	1,379	1,614	1,339
1989	1,559	1,591	1,373	1,461	1,782	1,273
1990	1,579	1,632	1,425	1,504	1,779	1,341
1991	1,601	1,701	1,381	1,461	1,732	1,363
1992	1,583	1,691	1,360	1,400	1,741	1,312
1993	1,508	1,576	1,328	1,271	1,643	1,324
1994	1,461	1,508	1,300	1,275	1,502	1,313
% change from 80 to 94	5.6	7.0	3.5	(0.2)	10.0	5.9
Ave. Ann. Compound Rate of Change (80 to 94)	0.4	0.5	0.3	0.0	0.7	0.4
			Males (45-64)			
1980	1,389	1,412	1,242	1,217	1,352	1,240
1981	1,414	1,424	1,205	1,393	1,390	1,269
1982	1,440	1,405	1,375	1,302	1,524	1,244
1983	1,494	1,421	1,286	1,327	1,572	1,251
1984	1,474	1,433	1,378	1,309	1,567	1,246
1985	1,479	1,432	1,361	1,378	1,588	1,232
1986	1,522	1,503	1,386	1,447	1,615	1,309
1987	1,492	1,466	1,363	1,453	1,506	1,234
1988	1,517	1,526	1,400	1,372	1,517	1,321
1989	1,548	1,571	1,368	1,419	1,698	1,229
1990	1,547	1,579	1,385	1,457	1,694	1,258
1991	1,572	1,666	1,361	1,437	1,634	1,313
1992	1,535	1,615	1,314	1,325	1,641	1,264
1993	1,461	1,507	1,282	1,213	1,544	1,271
1994	1,413	1,443	1,251	1,221	1,405	1,257
% change from 80 to 94	1.8	2.2	0.7	0.3	3.9	1.4
Ave. Ann. Compound Rate of Change (80 to 94)	0.1	0.2	0.1	0.0	0.8	0.1
			Females (45-64)			
1980	1,378	1,407	1,269	1,336	1,380	1,240
1981	1,401	1,397	1,231	1,395	1,514	1,305
1982	1,410	1,383	1,230	1,344	1,577	1,255
1983	1,467	1,412	1,303	1,355	1,680	1,270
1984	1,472	1,425	1,342	1,339	1,715	1,282
1985	1,492	1,432	1,358	1,410	1,655	1,345
1986	1,519	1,495	1,330	1,502	1,741	1,366
1987	1,520	1,517	1,402	1,527	1,663	1,274
1988	1,547	1,557	1,445	1,386	1,714	1,356
1989	1,570	1,610	1,378	1,503	1,870	1,318
1990	1,612	1,684	1,464	1,551	1,868	1,427
1991	1,631	1,736	1,401	1,485	1,835	1,416
1992	1,630	1,765	1,405	1,475	1,844	1,361
1993	1,554	1,644	1,373	1,329	1,746	1,378
1994	1,509	1,572	1,348	1,329	1,602	1,371
% change from 80 to 94	9.5	11.7	6.2	(0.6)	16.1	10.6
Ave. Ann. Compound Rate of Change (80 to 94)	0.7	0.8	0.4	(0.1)	1.1	0.7

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .

Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

March 1998
Health Economics

APPENDIX III, TABLE 3D

REAL PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN 1994 DOLLARS) BY AGE GROUP AND GENDER FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (65+)			
1980	5,917	5,592	5,319	4,551	7,598	6,150
1981	6,058	5,664	5,451	4,793	8,052	6,102
1982	6,192	5,735	5,490	4,770	8,431	6,040
1983	6,256	5,853	5,742	5,068	8,749	6,100
1984	6,368	6,038	5,927	4,989	8,865	6,289
1985	6,471	6,073	6,164	5,190	9,236	6,266
1986	6,570	6,251	6,085	5,487	9,430	6,390
1987	6,647	6,355	6,200	5,614	9,351	6,353
1988	6,839	6,654	6,379	5,692	9,520	6,446
1989	6,928	6,898	6,448	5,828	8,360	6,633
1990	7,029	7,096	6,624	6,033	8,400	6,923
1991	7,220	7,524	6,367	5,955	8,076	7,217
1992	7,233	7,513	6,468	5,637	8,130	7,430
1993	7,010	7,108	6,455	5,358	7,720	7,731
1994	6,896	6,942	6,401	5,507	7,112	7,759
% change from 80 to 94	16.5	24.1	20.3	21.0	(6.4)	26.2
Ave. Ann. Compound Rate of Change (80 to 94)	1.1	1.6		1.4	(0.5)	1.7
			Males (65+)			
1980	5,439	5,066	5,049	4,182	7,146	5,260
1981	5,631	5,376	5,486	4,111	7,419	5,203
1982	5,774	5,365	5,481	4,431	7,806	5,219
1983	5,898	5,580	5,381	4,683	8,096	5,151
1984	6,031	5,719	5,627	4,628	8,304	5,517
1985	6,120	5,787	5,782	4,853	8,516	5,384
1986	6,234	5,944	5,760	5,150	8,814	5,607
1987	6,329	6,017	5,869	5,227	8,858	5,472
1988	6,494	6,264	5,979	5,297	8,993	5,715
1989	6,577	6,503	6,078	5,549	8,229	5,821
1990	6,670	6,674	6,114	5,589	8,384	5,987
1991	6,793	7,023	5,984	5,627	7,880	6,218
1992	6,783	6,976	6,274	5,186	7,990	6,289
1993	6,574	6,624	6,251	4,922	7,554	6,532
1994	6,462	6,478	6,189	5,058	6,924	6,555
Ave. Ann. Compound Rate of Change (80 to 94)	18.8	27.9	22.6	21.0	(3.1)	24.6
Rate from 80 to 94	1.2	1.8	1.5	1.4	(0.2)	1.6
			Females (65+)			
1980	6,278	5,970	5,532	4,875	7,981	6,865
1981	6,378	5,870	5,424	5,386	8,577	6,812
1982	6,503	5,998	5,497	5,061	8,941	6,681
1983	6,521	6,047	6,018	5,393	9,277	6,833
1984	6,614	6,264	6,155	5,289	9,312	6,880
1985	6,726	6,276	6,450	5,465	9,803	6,935
1986	6,813	6,467	6,326	5,761	9,910	6,980
1987	6,875	6,594	6,442	5,926	9,733	7,018
1988	7,087	6,929	6,671	6,010	9,927	6,999
1989	7,180	7,177	6,717	6,050	8,461	7,247
1990	7,288	7,396	6,993	6,384	8,411	7,634
1991	7,530	7,881	6,645	6,214	8,228	7,979
1992	7,558	7,898	6,609	5,991	8,239	8,301
1993	7,326	7,458	6,603	5,698	7,849	8,652
1994	7,212	7,279	6,555	5,857	7,259	8,688
% change from 80 to 94	14.9	21.9	18.5	20.1	(9.0)	26.6
Ave. Ann. Compound Rate of Change (80 to 94)	1.0	1.4	1.2	1.3	(0.7)	1.7

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .

Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX III, TABLE 3E

REAL PER CAPITA PROVINCIAL HEALTH EXPENDITURES (IN 1994 DOLLARS)
BY AGE GROUP AND GENDER
FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			Both Sexes (Total)			
1980	1,312	1,323	1,280	1,261	1,327	1,396
1981	1,346	1,344	1,302	1,263	1,386	1,437
1982	1,379	1,350	1,341	1,346	1,471	1,409
1983	1,432	1,382	1,384	1,400	1,547	1,441
1984	1,449	1,416	1,424	1,377	1,574	1,470
1985	1,478	1,439	1,461	1,444	1,621	1,494
1986	1,528	1,510	1,491	1,553	1,692	1,557
1987	1,540	1,528	1,516	1,573	1,654	1,529
1988	1,587	1,590	1,569	1,529	1,697	1,581
1989	1,634	1,657	1,598	1,593	1,750	1,605
1990	1,674	1,717	1,648	1,670	1,771	1,683
1991	1,727	1,819	1,610	1,656	1,734	1,730
1992	1,726	1,823	1,621	1,568	1,759	1,730
1993	1,678	1,732	1,619	1,479	1,689	1,802
1994	1,661	1,698	1,615	1,517	1,574	1,814
% change from 80 to 94	26.6	28.4	26.1	20.3	18.6	29.9
Ave. Ann. Compound Rate of Change (80 to 94)	1.7	1.8	1.7	1.3	1.2	1.9
			Males (Total)			
1980	1,115	1,116	1,108	1,080	1,144	1,139
1981	1,150	1,152	1,160	1,084	1,170	1,191
1982	1,179	1,147	1,204	1,176	1,244	1,163
1983	1,226	1,180	1,183	1,209	1,301	1,174
1984	1,236	1,201	1,226	1,191	1,325	1,214
1985	1,258	1,222	1,240	1,251	1,365	1,211
1986	1,300	1,279	1,284	1,348	1,422	1,280
1987	1,309	1,286	1,286	1,361	1,392	1,246
1988	1,348	1,342	1,330	1,324	1,432	1,310
1989	1,388	1,395	1,353	1,387	1,488	1,320
1990	1,422	1,442	1,381	1,431	1,523	1,369
1991	1,466	1,528	1,360	1,434	1,477	1,414
1992	1,460	1,528	1,378	1,332	1,501	1,423
1993	1,422	1,457	1,375	1,256	1,440	1,486
1994	1,408	1,435	1,369	1,290	1,338	1,474
% change from 80 to 94	26.2	28.7	23.6	19.4	17.0	27.1
Ave. Ann. Compound Rate of Change (80 to 94)	1.7	1.8	1.5	1.3	1.1	1.7
			Females (Total)			
1980	1,506	1,527	1,450	1,445	1,520	1,634
1981	1,540	1,531	1,441	1,445	1,614	1,683
1982	1,577	1,548	1,475	1,519	1,709	1,654
1983	1,636	1,580	1,581	1,593	1,804	1,707
1984	1,660	1,626	1,618	1,565	1,832	1,725
1985	1,695	1,652	1,678	1,637	1,885	1,775
1986	1,752	1,736	1,695	1,759	1,968	1,832
1987	1,768	1,765	1,742	1,785	1,923	1,809
1988	1,821	1,833	1,804	1,734	1,978	1,850
1989	1,877	1,913	1,840	1,798	2,018	1,888
1990	1,922	1,985	1,912	1,907	2,023	1,995
1991	1,984	2,104	1,857	1,876	1,995	2,044
1992	1,987	2,112	1,861	1,803	2,021	2,073
1993	1,930	2,000	1,860	1,701	1,941	2,134
1994	1,909	1,955	1,856	1,741	1,812	2,150
% change from 80 to 94	26.7	28.1	28.0	20.5	19.2	31.5
Ave. Ann. Compound Rate of Change (80 to 94)	1.70	1.80	1.80	1.30	1.30	2.0

Data Source: Canadian Institution for Health Information (CIHI), unpublished data .
Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX IV

PRICE INDICES FOR THE SELECTED PROVINCES AND CANADA

- ***Consumer Price Indices***
- ***Government Health Care Implicit Price Indices***
- ***GDP Implicit Price Indices***
- ***Government Goods and Services Price Indices***

APPENDIX IV, TABLE 1

CONSUMER PRICE INDICES AND GOVERNMENT HEALTH CARE IMPLICIT PRICE INDICES FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	Consumer Price Indices * (1994 = 1)					
1980	0.514	0.506	0.520	0.523	0.534	0.507
1981	0.578	0.568	0.579	0.584	0.602	0.579
1982	0.640	0.629	0.630	0.637	0.671	0.640
1983	0.677	0.668	0.671	0.677	0.705	0.674
1984	0.707	0.701	0.696	0.705	0.724	0.702
1985	0.735	0.730	0.726	0.730	0.746	0.724
1986	0.765	0.762	0.758	0.751	0.771	0.745
1987	0.799	0.800	0.789	0.788	0.802	0.768
1988	0.831	0.838	0.823	0.823	0.823	0.795
1989	0.872	0.887	0.861	0.859	0.858	0.831
1990	0.914	0.929	0.901	0.897	0.907	0.876
1991	0.966	0.972	0.947	0.944	0.961	0.923
1992	0.980	0.982	0.961	0.953	0.975	0.948
1993	0.998	0.999	0.986	0.982	0.986	0.981
1994	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.021	1.029	1.037	1.039	1.015	1.050
% change from 80 to 95	98.7	103.5	99.2	98.8	90.3	107.0
Ave. Ann. Compound Rate of Change (80 to 95)	4.7	4.8	4.7	4.7	4.4	5.0
	Govt. Health Care Implicit Price Indices ** (1994 = 1)					
1980	0.490	0.445	0.492	0.494	0.517	0.503
1981	0.557	0.511	0.579	0.574	0.586	0.583
1982	0.632	0.588	0.651	0.645	0.684	0.670
1983	0.671	0.640	0.694	0.686	0.746	0.697
1984	0.703	0.677	0.721	0.729	0.753	0.707
1985	0.734	0.726	0.746	0.741	0.777	0.717
1986	0.762	0.769	0.778	0.763	0.804	0.733
1987	0.803	0.825	0.818	0.776	0.818	0.782
1988	0.831	0.847	0.844	0.815	0.839	0.802
1989	0.871	0.883	0.893	0.860	0.879	0.854
1990	0.905	0.902	0.935	0.908	0.901	0.894
1991	0.944	0.935	0.980	0.957	0.957	0.945
1992	0.975	0.962	0.999	0.989	0.983	0.992
1993	0.996	0.991	0.994	1.002	0.996	1.002
1994	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.011	1.015	1.018	1.017	1.006	1.004
% change from 80 to 95	106.5	128.2	107.0	105.7	94.7	99.7
Ave. Ann. Compound Rate of Change (80 to 95)	4.9	5.7	5.0	4.9	4.5	4.7

n/a: not available

Sources: - * Statistics Canada "Canadian Economic Observer- 1995/96"

** Canadian Institution for Health Information (CIHI), "National Health Expenditure Trends - 1975 to 1997", December 1997, and unpublished data

APPENDIX IV, TABLE 2

GROSS DOMESTIC PRODUCT IMPLICIT PRICE INICES
AND GOVERNMENT GOODS AND SERVICES IMPLICIT PRICE INDICES (1994=1)
FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			GDP Implicit Price Indices * (1994 = 1)			
1980	n/a	n/a	n/a	n/a	n/a	n/a
1981	0.645	0.611	0.653	0.825	0.854	0.606
1982	0.701	0.663	0.698	0.860	0.937	0.660
1983	0.736	0.695	0.734	0.868	0.990	0.681
1984	0.759	0.717	0.742	0.904	0.998	0.713
1985	0.779	0.749	0.766	0.927	0.979	0.713
1986	0.797	0.791	0.789	0.841	0.867	0.737
1987	0.835	0.835	0.826	0.865	0.886	0.766
1988	0.874	0.879	0.893	0.922	0.871	0.804
1989	0.916	0.929	0.923	0.943	0.910	0.850
1990	0.945	0.957	0.927	0.918	0.965	0.878
1991	0.972	0.991	0.965	0.903	0.963	0.905
1992	0.984	0.997	0.972	0.945	0.973	0.941
1993	0.994	1.005	0.977	0.970	0.990	0.967
1994	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.018	1.009	1.026	1.046	1.010	1.027
% change from 81 to 95	57.8	65.1	57.2	26.8	18.2	69.3
Ave. Ann. Compound Rate of Change (81 to 95)	3.3	3.6	3.3	1.7	1.2	3.8
			Govt. Goods and Services Implicit Price Indices ** (1994 = 1)			
1980	0.518	0.491	0.528	0.521	0.541	0.501
1981	0.586	0.559	0.593	0.584	0.611	0.585
1982	0.654	0.623	0.666	0.670	0.688	0.660
1983	0.693	0.665	0.722	0.723	0.745	0.692
1984	0.721	0.694	0.750	0.761	0.760	0.706
1985	0.750	0.729	0.774	0.784	0.776	0.716
1986	0.774	0.762	0.799	0.814	0.805	0.732
1987	0.804	0.796	0.828	0.831	0.825	0.762
1988	0.835	0.831	0.868	0.861	0.853	0.783
1989	0.871	0.868	0.902	0.894	0.881	0.825
1990	0.919	0.915	0.942	0.944	0.924	0.870
1991	0.959	0.962	0.974	0.967	0.969	0.922
1992	0.985	0.989	0.994	0.985	0.992	0.966
1993	0.992	0.998	0.994	0.986	1.001	0.980
1994	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.009	1.005	1.013	1.024	0.999	1.023
% change from 80 to 95	72.1	79.6	70.7	75.3	63.6	74.8
Ave. Ann. Compound Rate of Change (80 to 95)	4.5	4.9	4.4	4.6	4.2	4.9

n/a: not available

Data Sources

* Canadian Institution for Health Information (CIHI), for Statistics Canada's data for Gross Domestic Product Implicit Price Indices

** Statistics Canada, Cansim Data Series for Government Goods and Services Implicit Price Indices

APPENDIX V

DISTRIBUTION OF PROVINCIAL EXPENDITURES AND POPULATION AMONG AGE GROUP FOR THE SELECTED PROVINCES AND CANADA

APPENDIX V, TABLE 1

PERCENTAGE DISTRIBUTION OF PROVINCIAL HEALTH EXPENDITURES AMONG AGE GROUPS FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			0-14			
1980	8.6	7.9	8.0	10.8	9.6	7.7
1981	8.1	7.6	7.7	8.3	9.2	7.7
1982	7.9	7.3	7.6	10.6	9.4	7.5
1983	7.9	7.4	7.4	10.5	9.1	7.5
1984	7.8	7.2	6.9	10.2	8.9	7.2
1985	7.6	7.2	6.4	10.1	8.6	7.0
1986	7.6	7.2	7.0	10.2	8.6	6.8
1987	7.4	7.1	6.7	9.4	8.1	6.5
1988	7.2	6.9	6.6	8.9	7.8	6.5
1989	7.3	6.9	6.6	8.7	8.8	6.4
1990	7.0	6.7	6.4	8.3	8.5	6.3
1991	7.1	6.6	6.5	8.1	8.8	5.9
1992	6.7	6.3	6.2	7.7	8.8	5.7
1993	6.5	6.2	6.1	7.7	8.7	5.5
1994	6.4	6.1	6.0	7.6	8.6	5.4
			15-44			
1980	29.2	30.0	25.4	27.6	32.2	28.8
1981	29.1	29.8	25.2	25.7	32.6	30.0
1982	29.0	29.5	25.4	28.4	33.1	29.2
1983	29.5	29.2	25.4	28.1	33.2	29.1
1984	29.1	29.0	25.2	28.3	32.1	28.4
1985	28.6	28.9	24.9	28.4	31.0	28.0
1986	28.5	29.0	25.9	28.8	31.1	27.7
1987	27.9	28.5	25.4	28.5	29.6	26.8
1988	27.5	28.1	25.2	26.8	28.9	26.5
1989	27.7	28.3	25.6	26.4	32.9	26.4
1990	27.8	28.3	25.2	26.2	32.9	26.5
1991	27.3	27.7	25.4	25.9	32.5	25.9
1992	26.7	27.3	24.9	25.3	31.8	25.4
1993	26.5	27.0	24.8	24.8	31.5	25.2
1994	26.3	26.7	24.9	24.6	31.0	25.2
			45-64			
1980	19.9	21.1	18.8	19.3	16.6	17.1
1981	19.7	20.9	17.9	20.8	16.5	17.1
1982	19.5	20.6	18.3	18.2	16.5	17.0
1983	19.5	20.5	17.5	17.5	16.6	16.9
1984	19.3	20.2	17.7	17.3	16.7	16.6
1985	19.0	19.8	17.1	17.0	16.2	16.7
1986	18.8	19.6	16.5	16.6	16.1	16.7
1987	18.5	19.2	16.4	16.4	15.7	15.9
1988	18.4	19.0	16.3	15.7	15.8	16.5
1989	18.2	18.6	15.5	16.0	17.1	15.5
1990	18.1	18.4	15.6	15.9	16.9	15.6
1991	17.9	18.2	15.6	15.6	17.0	15.5
1992	18.1	18.4	15.5	16.0	17.3	15.0
1993	18.1	18.4	15.5	15.6	17.4	15.0
1994	18.1	18.3	15.4	15.4	17.5	15.1
			65+			
1980	42.3	41.0	47.9	42.3	41.6	46.3
1981	43.0	41.7	49.3	45.2	41.7	45.1
1982	43.6	42.6	48.7	42.8	40.9	46.3
1983	43.0	42.9	49.6	43.9	41.1	46.5
1984	43.9	43.7	50.2	44.3	42.2	47.8
1985	44.8	44.1	51.7	44.5	44.2	48.4
1986	45.0	44.2	50.6	44.4	44.3	48.8
1987	46.2	45.2	51.5	45.7	46.6	50.7
1988	46.9	46.0	51.9	48.6	47.5	50.5
1989	46.8	46.2	52.3	48.9	41.2	51.7
1990	47.1	46.5	52.7	49.6	41.6	51.7
1991	47.7	47.5	52.4	50.4	41.7	52.7
1992	48.5	47.9	53.4	51.0	42.1	53.8
1993	48.9	48.4	53.6	51.8	42.5	54.3
1994	49.3	48.9	53.6	52.4	42.9	54.4

Data Source: Canadian Institution for Health Information (CIHI) unpublished data .
Note: See Appendix I for original data sources used by CIHI and for explanatory notes and definitions.

APPENDIX V, TABLE 2

PERCENTAGE DISTRIBUTION OF POPULATION AMONG AGE GROUPS FOR THE SELECTED PROVINCES AND CANADA

Year	Canada	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
			0-14			
1980	22.7	22.1	23.5	24.8	24.3	21.5
1981	22.3	21.6	23.1	24.5	23.9	21.1
1982	22.0	21.3	22.8	24.4	23.7	21.0
1983	21.7	21.0	22.6	24.4	23.7	20.8
1984	21.5	20.8	22.4	24.3	23.7	20.6
1985	21.3	20.5	22.2	24.2	23.6	20.4
1986	21.0	20.2	21.9	24.1	23.4	20.1
1987	20.9	20.2	21.9	24.1	23.4	20.0
1988	20.8	20.2	21.9	24.0	23.4	20.0
1989	20.8	20.1	21.9	24.0	23.5	20.1
1990	20.7	20.2	21.9	24.0	23.5	20.1
1991	20.7	20.2	21.8	23.8	23.5	20.0
1992	20.6	20.2	21.8	23.7	23.4	19.9
1993	20.5	20.2	21.7	23.5	23.2	19.8
1994	20.4	20.2	21.7	23.3	23.0	19.7
			15-44			
1980	49.0	48.4	45.9	44.4	52.3	48.7
1981	49.3	48.6	46.1	44.7	53.2	49.1
1982	49.5	48.8	46.4	44.9	53.5	49.1
1983	49.5	48.9	46.7	45.3	53.2	48.9
1984	49.5	49.0	47.0	45.6	52.7	48.9
1985	49.6	49.2	47.3	45.8	52.5	48.7
1986	49.6	49.3	47.5	45.8	52.4	48.6
1987	49.5	49.4	47.5	45.7	52.0	48.3
1988	49.3	49.3	47.4	45.5	51.5	48.1
1989	49.1	49.3	47.1	45.1	51.1	47.9
1990	48.9	49.2	46.9	44.7	50.9	47.8
1991	48.5	48.8	46.7	44.4	50.5	47.6
1992	48.1	48.3	46.3	44.2	50.1	47.3
1993	47.7	47.8	46.0	44.0	49.6	47.1
1994	47.2	47.2	45.6	43.9	49.1	46.8
			45-64			
1980	18.9	19.8	19.2	19.1	16.1	19.3
1981	18.9	19.9	19.1	18.8	15.8	19.1
1982	18.9	19.9	18.9	18.6	15.7	19.2
1983	18.9	20.0	18.7	18.2	15.8	19.3
1984	19.0	20.0	18.6	17.9	16.1	19.4
1985	18.9	19.9	18.3	17.6	16.2	19.4
1986	18.9	19.8	18.2	17.5	16.2	19.4
1987	18.9	19.6	18.0	17.4	16.4	19.4
1988	19.0	19.6	18.0	17.4	16.6	19.5
1989	19.1	19.4	18.0	17.5	16.7	19.5
1990	19.1	19.4	18.0	17.6	16.8	19.6
1991	19.4	19.5	18.2	17.7	17.0	19.7
1992	19.7	19.9	18.5	18.0	17.4	20.2
1993	20.1	20.2	18.8	18.1	17.9	20.6
1994	20.5	20.6	19.2	18.4	18.4	20.8
			65+			
1980	9.4	9.7	11.5	11.7	7.3	10.5
1981	9.6	9.9	11.8	11.9	7.2	10.6
1982	9.7	10.0	11.9	12.1	7.1	10.8
1983	9.8	10.1	12.0	12.1	7.3	11.0
1984	10.0	10.2	12.1	12.2	7.3	11.2
1985	10.2	10.5	12.2	12.4	7.8	11.5
1986	10.5	10.7	12.4	12.6	7.9	11.9
1987	10.7	10.9	12.6	12.8	8.3	12.2
1988	10.9	11.0	12.8	13.0	8.5	12.4
1989	11.0	11.1	13.0	13.4	8.6	12.5
1990	11.2	11.3	13.1	13.7	8.8	12.6
1991	11.4	11.3	13.3	14.0	8.9	12.6
1992	11.6	11.6	13.4	14.2	9.1	12.7
1993	11.7	11.8	13.4	14.3	9.3	12.7
1994	11.9	12.0	13.5	14.4	9.5	12.7

Data Source: Population data are obtained from the Canadian Institute of Health Information (CIHI). The institution used the most recent population figures estimated by the Demography Division of Statistics Canada.

March 1998
Health Economics